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EDITORIAL**1960 . . . AND FORWARD!**

By the time this issue of "Amateur Radio" reaches Australian Amateurs 1960 will have dawned. What this year—and the years ahead—hold for us is something for speculation indeed. At the time of going to press the outcome of the International Telecommunications Conference held in Geneva from August until December last year is not finally settled. John Moyle, VK2JU, our accredited representative with the official Australian delegation, completed his mission for the Wireless Institute of Australia and returned to his home immediately to undergo a most serious operation. One of our first New Year wishes will be for his rapid and complete recovery—a wish which we know every Amateur in Australia will join with in conveying to John and his family.

The task which John undertook on behalf of us all was gigantic; what he achieved for us in the way of a vast and comprehensive report on the entire conference and its effect on our hobby was a superhuman effort. For this our thanks will be eternally his, and his report to the Federal Council of this Institute will be gratefully received although it will be somewhat delayed due to his unfortunate illness. We cherish a sincere hope that by the time you read this issue of the magazine he will have passed a dangerous milestone in his life and be well on the way to recovery.

Despite the most prolific and dangerous opposition to the frequencies formerly allocated to the Amateur

Service, we have emerged from the conflict with less damage than anticipated at one stage in the proceedings of the Conference. The pressure for frequency space was far beyond anything we imagined, and if it had not been for the firm stand taken by many countries who rate the Amateur service as something worthwhile in the world of communications, we would have fared far worse than what the final result of the Conference is anticipated to be.

It is probable that we shall lose the 100 kc. off the top end of the 80 metre band, but in return we shall have an exclusive assignment whereas previously the band was shared with fixed and mobile services.

In Region III. it is likely that we shall lose 50 kc. off the top end of the 40 metre band; this agreement for Region III. is a disastrous one for the Amateurs in this Region and is tied up with politics over which we have so little control that the possibility of a change of attitude faded as the Conference progressed. There is some hope that the Conference will agree to the removal of short-wave broadcasting from the 7.0 to 7.1 Mc. exclusively assigned portion of the band, but this will not finally be known for some time.

There is every reason to believe that the 20, 15, 11 and 10 metre bands will remain as they are at present with the exception of a possible very small reduction in the 15 metre band to make way for space frequencies. This too is indefinite.

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C. A. CULLINAN,* VK3AXU

ALTHOUGH designed some 25 years ago, the AR7 receiver still ranks as an exceptionally fine general-purpose communications receiver and is much sought after by discerning Amateurs for a number of reasons.

These include the fact that it can be put into use in Amateur service without any modifications, and in this regard, is somewhat unusual in equipment obtained from Services sources. Because of its straightforward design it is capable of being modified for special services, without very much trouble and in a manner which does not destroy its re-sale value. Also its performance, as a general-purpose receiver, is outstanding when its owner learns how to use all its capabilities.

However, in common with all general-purpose receivers, it does need modification for special services such as the Amateur service and some time ago a very fine series of articles appeared in "Amateur Radio" covering some worthwhile modifications.¹

With the advent of s.s.b. into Amateur practice the AR7 revealed some shortcomings, in what was for it, a new type of use. It must be remembered that when the AR7 was designed, a long way back in the late thirties, s.s.b. was little used except in overseas radio telephone circuits, probably none was used in the Defence Services, and as a result the specification for the AR7 did not include provision for s.s.b. It is also well worth while remembering that many similar receivers of the period, including the AR7, did not include provision for s.s.b. until within the last couple of years, when the popularity of Amateur s.s.b. created the necessary demand.

All this is not to say that an unmodified AR7 cannot be used on s.s.b. I can, but the operation of resolving both s.s.b. and d.s.b. is a rather difficult operation. Yet with a few simple modifications, which need not destroy the looks or re-sale value of the set, the AR7 can be made into a receiver that is a pleasure to handle on s.s.b.

The purpose of this paper is to outline such a series of modifications made to the AR7 at this station.

Four modifications were made, these being:—

- Improvement to frequency stability of both r.f. and beat frequency oscillators.
- Fitting a product detector for better c.w. and s.s.b. work.
- Improving the tuning rate, mainly by bandspreading.
- Fitting an improved tone control.

PRODUCT DETECTOR

For mechanical reasons it is desirable to fit the product detector first. The product detector theory has already been covered in articles² in "A.R." and will not be repeated here. Due to its action it gives an apparent reduction in some forms of QRM and is very helpful with static. It is not generally real-

ised that the product detector requires a very small input and as a result its output is also low. This misconception has given rise to the thought by many Amateurs that it is not worth using. This is far from the case as the disadvantage of low output is more than made up by its worthwhile characteristics. One thing the product detector does do is to show up ordinary a.m. transmissions which have either f.m. or frequency drift in them; it also displays perfectly the ability or otherwise of an operator's netting abilities.

Fitting the Product Detector.—This is provided with an Oak wafer switch, so that either diode or linear detection can be used. The switch is mounted in the top right hand corner of the front panel (looking at the front of the AR7). With

Turn the chassis over and along the end wall of the chassis underneath the output transformer drill a horizontal line of small holes to provide ventilation. On this end wall mount a nine-pin socket, on a couple of pieces of copper tubing. Use countersunk screws so that the outside of the chassis will be smooth. To find the location for this socket, first mount a 7,500 ohm, 20 watt, resistor on the back wall of the chassis just under the second aerial terminal. This resistor will project out into the chassis, being mounted with a long bolt. The product detector valve must clear this resistor as much as possible without being placed too near the b.f.o. shield.

Little comment is needed on the circuitry of the product detector. The

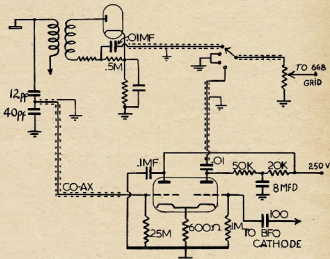


Fig. 1.—Product Detector for AR7.

Note alterations in the diode circuit. Components not marked are original.

a square along the top of the panel draw a light pencil line in the same line as the centre of the crystal switch. Then with the square laid on the right hand end of the panel, cross this pencil line with another which is in line with the tone control and the noise limiter shafts.

At the point of the cross, drill a hole through the panel and mount the wafer switch, keeping it as close to the back of the panel as possible. Note that the switch is a four-position one. This arrangement reduces leakage across the switch.

A hole to take a large rubber grommet is now drilled in the chassis to take the wires from the switch, and to those of the voltage regulator valve which will be fitted in the second stage of the modifications. This hole is drilled alongside the end of the gang condenser shield and just back of the crystal filter shielding. Make certain that the hole does not foul anything under the chassis.

two voltage splitting condensers are mounted as close to the plate of the second i.f. valve as possible, and a short section of co-ax used to connect the junction of these condensers to the product detector valve socket. The two grid resistors of the 12AU7 valve and the cathode resistor should be wired directly to the valve socket and to the nearest common earth point.

After installation of the product detector, it will be necessary to re-align the last if, transformer due to the slight extra loading of the product detector. It will also be necessary to re-adjust the slug of the b.f.o. coil slightly. Do not worry over the use of the piece of co-ax in the circuit. Its position places its capacity across the lower of the voltage splitting condensers and is part of the design. It will be noted that the circuit works, that the voltage control of the 6G8W has its low potential end connected to earth. In most AR7's, this is returned to the a.v.c. net-

* 10 Wallace Street, Colac, Vic.

work to give audio a.v.c., but in the receiver here this was not done by the manufacturer, although the components were included. Possibly there was a wiring omission in the factory, or some models were altered for a definite requirement. This is mentioned because the instruction book does not show this variation.

In using the product detector it will be found that a.m. stations can be read without the b.f.o. being switched on, if a high signal level is fed into the detection system. This is mainly due to the fact that the diode is also operating and is coupled into the 6G8G cathode. By turning back the r.f. gain control this leakage disappears and a.m. stations then require use of the b.f.o. to obtain detection.

There is a slight tendency for the set to motorboat when using the product detector, when the audio volume control is turned up very high, but this is of no consequence here as the speaker output as this point is too high anyway and would only worry the neighbours. So much for the product detector.

FREQUENCY STABILITY

Whilst the stability of the AR7 is of a high order, it can be improved still further and is a must for s.s.b. Two things were done here, the first being to fit a 5 pF. negative temperature condenser from the stator of the h.f. oscillator to the frame of the condenser. This was fitted at the top of the condenser when looking down into the set and has helped quite a lot. All coils then want re-aligning slightly to bring them back to calibration.

The second approach to the stability problem was to use voltage regulation on both oscillators. A voltage regulator valve, VR150, was mounted horizontally in the set in the space between the wafer switch for the product detector and the shield of the crystal, keeping it as far away as possible from the latter. A small octal socket was mounted on the end wall of the chassis, using short sections of $\frac{1}{4}$ inch copper tube as spacers. The cathode of this valve is taken to the common earth system under the chassis, whilst the anode is connected to one end of the 7,500 ohm 20 watt resistor mentioned before. The h.t. connections to the h.f. and b.f.o. oscillators were traced and were connected at the resistor where it goes to the anode of the regulator valve. The b.f.o. dropping resistor was short circuited. The dropping resistors to the h.f. oscillator were not removed, but a 6J8G valve was substituted for the original 6K8G.

These simple modifications have made a big difference to the frequency stability and it is now felt that most of the drift which occurs when tuned to VVWH is due to the b.f.o. The drift is far less than that observed on many Amateurs, including the s.s.b. stations.

TUNING RATE

S.A.B. demands that the receiver have a very slow tuning rate as it is necessary to tune the receiver and set the b.f.o. within a few cycles of the original carrier. As mentioned before, the AR7 can do this but it's a rather tedious affair and if several stations are in an s.s.b. network and are not exactly netted, then matters become very complex

for the listener. The first thing to be done is to improve the ability to set the b.f.o. and this is done by substituting a large diameter knob for the small one. A bakelite knob of the same diameter as that on the main dial will just fit, without fouling the b.f.o. switch. A similar knob should be placed on the crystal filter phasing control, not only to balance the looks of the set, but to give an added vernier effect when tuning the crystal filter. The next thing to be done is to bandspread the coil boxes. Data for bandspredding for the 14, 21 and 28 Mc. bands has been given in the excellent series of articles mentioned before.

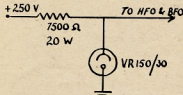


Fig. 2.—AR7 Voltage Regulator.
The jumper in the VR150 is not used.

However the amount of bandspredding on the 7 Mc. band leaves a lot to be desired. Therefore a coil box was modified and bandspredding is now such that the box covers only 7.0 to 7.19 Mc. Whilst this amount of bandspredding makes the AR7 appear to have the selectivity of a crystal set, it does make the tuning in of s.s.b. stations a very simple matter.

Details of the modifications are as follows:

1st r.f. coil.—14 turns of 18 gauge enamelled wire wound on a $\frac{3}{8}$ " slug-tuned former. Length of winding, 1". Primary, 3 turns of 30 en. wire interwound with bottom three turns of the secondary.

2nd r.f. coil.—As above, but primary has six turns.

Mixer coil.—As above, but primary has nine turns.

Oscillator coil.—9 turns of 18 gauge en. wire wound on a 1" diameter former, slug-tuned. Length of winding, $\frac{3}{8}$ ". The plate winding is four turns of 30 en. wire interwound with bottom turns of grid winding.

Across the small trimmer condenser in the coil box are mounted two silver mica condensers, one of 100 pF. and the other of 25 pF. (if a band C box is used it will have two trimmers. Connect these in parallel and delete the 25 pF. condenser). On each coil assembly locate the short lead that connects the grid end of the winding to the stator of the gang condenser. Replace this lead with a silver mica condenser of 20 pF.

The boxes are re-aligned by using the slug to set the box to 7.0 Mc. with the dial at 500, and the trimmer is used to set the box to approx. 7.2 Mc. with the dial at 0.

As in use here, 7.15 Mc. occurs at 130 on the dial when 7.0 Mc. is found at 500. There is a certain amount of interaction between the trimmer and the slug in each box when aligning the coils. The method used here was to connect a signal generator to the grid

of the mixer valve, through a small condenser with a half meg. resistor as grid leak to earth.

With the gang condenser at minimum capacity the oscillator trimmer was adjusted to get a signal on the high side. The generator was then moved lower in frequency and the slug adjusted. Several repetitions were required to get the tracking correct. When this was done, the signal generator was moved to the grid of the 2nd r.f. stage and the mixer grid coil was adjusted. The same procedure was carried out with the other coils.

If it is thought that this is too much bandspredding, then it is possible to remove the 25 pF. condenser from the coil assembly and increase the value of the series condenser from 20 pF. to 47 or 50 pF. This will then place 0 on the dial at about 7.450 Mc. when 7.0 Mc. falls at 500 on the dial.

This method of bandspredding could be used with the existing coils in an existing D box, but a spare one was not available here, so a spare C box was used.

TRIMMER CONTROL

The tone control as fitted to the AR7 is the type used in most b.c. sets and simply cuts off the higher audio frequencies. The tone control shown in the circuit was installed.³ When the arm of the pot. is at the earthed end, there is a certain amount of treble cut, but this is not carried to extremes. With the arm of the pot. at the other end, there is treble accentuation and an amount of bass cut. If a linear pot. is used, the system will give a flat output with the arm in the centre position.

This type of tone control assists greatly when listening to stations which are "boomy" due to distance or other causes. It also helps the intelligibility under bad conditions and has been found a worthwhile feature.

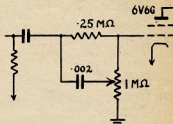


Fig. 3.—Tone Control for AR7.

Components whose values are not shown are normal receiver components. This tone control gives treble cut, through flat response to bass cut with slight treble increase.

TUNING S.S.B.

The method of tuning s.s.b. is to tune the receiver with the r.f. gain control at maximum, for greatest output from the receiver, for any given audio volume control setting. This peaks the sideband in the bandpass of the receiver's i.f. system. The r.f. gain is then turned down, the b.f.o. switched on, and adjusted until the speech becomes natural. If necessary, the r.f. gain is adjusted as well as the b.f.o., but this is not as important with the product detector as it is with the diode detector. Audio volume is controlled

(Continued on Page 9)

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Amateur Radio, January, 1960

WHAT VALUE COMPONENT?

KNOWING HOW TO SUBSTITUTE CAN SAVE YOU MONEY

LEWIS G. McCOY, W1ICP

NO doubt you have wondered at times how the designer of a piece of radio gear arrives at the values of the different components used in it. Also, you've probably been mystified by the fact that different component values have been used for what seem to be identical purposes in similar pieces of equipment. And—probably more important to you as a prospective builder—you've debated what values can be substituted while still having the unit work as the designer intended.

Actually, there are very few critical values in a piece of radio gear. For example, it is relatively simple to design two transmitters having the same output power and covering the same frequency ranges but with quite different component values in each one. In this article the functions of some of the more commonly used components will be discussed, and the question of what values can be substituted will be considered.

CAPACITORS

Let's take capacitors first and see what they are used for and what values will be suitable in each application. One of the things a capacitor will do is pass r.f. and audio currents but stop d.c. In radio circuitry it is sometimes necessary to shunt such currents across certain parts of the circuit, and a "bypass" capacitor is used for this purpose. For example, a bypass is usually connected across points in the circuit where the power supply voltages are introduced. The bypass capacitor prevents r.f. from flowing back into the supply. Another case is where a resistor used for d.c. voltage dropping may offer an undesirably high impedance path to r.f. currents; a capacitor is used to bypass the r.f. around the resistance. An example of the uses of bypass capacitors is given in Fig. 1.

Capacitors carry a "working voltage" rating that indicates the maximum d.c. voltage that should be allowed to appear across the capacitor. Always use capacitors that have at least as high a rating as that specified by the designer. (It is of course permissible to use units that have a greater voltage rating than specified.) If ratings are not given in the design (and this happens quite frequently) you needn't be at a loss to choose the proper rating; simply determine what the supply voltage is and then use capacitors with ratings equal to or greater than that voltage.

Capacitance values of bypass capacitors are not critical in the 80 through 10 metre range. Values from 0.01 μF . to 0.001 μF . are commonly used. If you use values much greater than 0.01 μF . you run into two problems. First, the capacitor is likely to have significant inductance and the unit will not be an effective bypass at the frequency for

● The experienced Amateur knows that there is a wide tolerance in the values of many of the components that go into radio circuits, and very often a particular value is specified in a published description simply because it happened to be on hand at the time the circuit was tried out. The beginner, lacking this experience, sometimes misses opportunities to use what he already has, and thus is out of pocket for new parts he didn't really need to buy. This article should help answer the question "Can I substitute a such-and-such for a so-and-so?"

which it was intended. Second, the physical size of the capacitor will be much larger.

In v.h.f. construction, capacitors designed for this type of operation should be used. The older style mica and paper capacitors, while they may have the correct capacitance value, are not suited for v.h.f. work. The smallest (physically small) disk capacitors should be used. The biggest value of bypass capacitance is rarely more than 0.005 μF ., and even this value is used only for 6 and 2 metres. U.h.f. work requires special bypasses. The reason for limiting values to 0.005 μF . for v.h.f. work is that greater values will be inductive and physically large. It is important to keep lead lengths as short as possible in v.h.f. work, and this would be impossible if large capacitors were used.

Whenever t.v.i. suppression is a factor special bypassing techniques must be observed. This is a whole story in itself and cannot be covered in this article. However, the b.c.i. t.v.i. chapter of the Handbook treats the subject in considerable detail.

There is one other factor to consider when deciding on the value of a bypass capacitor. If the r.f. circuit being bypassed carries audio too, as in a modulated amplifier, the capacitance should be limited to a value that will not affect the higher audio frequencies—no more than 0.002 μF . in the ordinary case.

COUPLING AND BLOCKING CAPACITORS

A "blocking" capacitor is used to couple r.f. (or audio) currents from one circuit to another and to isolate one of the circuits from a d.c. voltage present on the other. An example of the use of blocking capacitors is shown in Fig. 1 at C3, C4 and C6.

"Coupling" and "blocking" capacitors actually perform similar functions, and the two terms are usually interchangeable. The distinction is that the blocking capacitor is a special case of coupling capacitor, in that it has to "block off" d.c. that might be harmful if present on one of the circuits. The blocking function is not always needed, since in some circuit arrangements a coupling capacitor is called for even though no d.c. voltages are involved. However, in most transmitting applications the coupling capacitor is used because d.c. blocking is essential, and it is therefore proper to call it a blocking capacitor.

Capacitance values and voltage ratings are similar to those used for bypasses. In r.f. circuits a minimum value of about 100 pF. is customarily used in the 80 through 10 metre range. Any value from 100 pF. to 0.01 μF . is permissible in this type of circuit. Occasionally you may encounter circuits where critical values are specified, and in such cases the designer's specifications should be followed.

POWER SUPPLY FILTER CAPACITORS

One of the purposes of a power supply filter is to smooth out the recti-

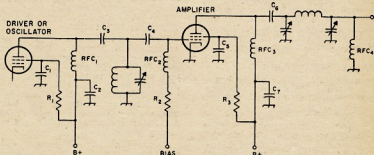


Fig. 1.—This typical circuit shows the uses of some of the components in a simple transmitter.

C1, C2, C3, C7—Bypass capacitors.
C3, C4, C6—Blocking or coupling capacitors.
R1, R2—Voltage-dropping resistors.
R3—Bias resistor.
RFC1, RFC2—Plate r.f. chokes.
RFC3—Grid r.f. choke.

RFC4—R.f. choke used as safety precaution in the event that C6 breaks down. In such case a dangerous d.c. voltage could appear on the feed line and antenna. With RFC4 in the circuit this voltage is short circuited if C6 is shorted.

fied a.c. voltage and keep the ripple percentage below certain limits. The power supply ripple should not exceed 5% for c.w. transmitters and should be no more than 1% for phone rigs. Modulator supplies and those for high-gain speech amplifiers should be held to considerably lower ripple figures.

The capacitance required in a filter capacitor, for a given ripple percentage, depends on the inductance of the associated filter choke. Let's consider the single section filter shown in Fig. 2A. The percentage of ripple obtained with this type filter is determined by the formula $100 \div LC$, where L is in henrys and C is in microfarads. It is obvious from the formula that in order to obtain 5% ripple the product of L and C must be at least 20. There is, of course, considerably more to the subject of power supply filters than can be given here. The Handbook should be consulted for information on other types of circuits.

The point to keep in mind is that there are certain minimum requirements for component values, and as long as the minimum requirements are satisfied a wide range of values can be used. For example, suppose the designer shows an 8 μ F capacitor but you happen to have a 16 μ F, or 20 μ F unit in your junk box. Since your capacitor more than meets the designer's requirements, it can be substituted.

When substituting a different capacitor in a power supply, never use one that has a lower voltage rating than specified. You will be safe in assuming that the designer's rating is the minimum.

The use of electrolytic capacitors has, until recently, been largely confined to low voltage supplies (up to 600 volts), but there has been a trend in the last few years toward the use of electrolytics in high voltage supplies as well. By connecting two or more capacitors in series, as in Fig. 2B, the total voltage rating can be increased. For example, two 500 volt 16 μ F electrolytics can be connected in series to obtain a 1,000 volt rating, at the expense of halving the capacitance so that the total becomes 8 μ F. Nevertheless, this is often economical; for example, using the two electrolytics to obtain 8 μ F, at 1,000 volts costs approximately \$1.75 while a similar capacitance in an oil-filled unit would be about \$9. It is permissible to substitute electrolytic capacitors for oil-filled or paper capacitors called for in a design, or in existing equipment. If, for example, a 10 μ F, 1,000 volt unit blows out in a power supply, it could be replaced by two 20 μ F, 500 volt electrolytics connected in series.

VARIABLE CAPACITORS

A common question asked by beginners is whether they can substitute variable capacitors having different values than those specified in a particular piece of equipment. The answer is yes in many cases. Suppose the circuit calls for a variable that has a minimum capacitance of 15 pF and a maximum of 100 pF and you have a unit that has a range of 10 pF to 150 pF. The range required in the circuit would fall within the limits of your unit so it would be OK to use it. The only time you couldn't substitute would be when your unit doesn't have

a low enough minimum capacitance or a large enough maximum. However, designers usually allow a certain amount of "extra" capacitance as a safety factor, and if you know the inductance of the circuit being tuned by the capacitor, you can find out how much range is actually required. One method is to use the A.R.R.L. Lightning Calculator. The calculator will show you what capacitance is needed to tune a given range and will also show you how to find the inductance of r.f. coils.

In substituting for a variable capacitor in a transmitter it is just as necessary to keep voltage ratings in mind as in the case of fixed capacitors. Use a variable with as much air gap between plates as was used in the original equipment.

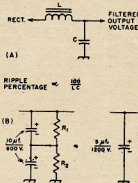


Fig. 2—A typical choke-input power supply filter is shown at A. The method of connecting capacitors in series to obtain a higher voltage rating is shown at B. When capacitors are connected in series each capacitor should be shunted with a resistor (R_1 , R_2) with a resistance of about 100 ohms per volt of supply voltage. The resistors can serve as part or all of the bleeder resistor.

RESISTORS

Resistors are used to provide bias voltages, to reduce or "drop" voltages, as bleeders in power supplies, and in many other applications. Most circuit designs are based on a plus-or-minus 10% resistance tolerance because resistors having this value of tolerance are generally available. However, in some cases tolerances are actually specified on a diagram, and in such event substitutions should be within the tolerance of the specified item. (This is, of course, true with any component.) If no tolerance is specified you can substitute any resistor value that falls within the 10% region.

Resistors can be connected in series or parallel to provide a desired resistance. For example, suppose the circuit calls for a 5,000 ohm, 2 watt resistor and you have two 10,000 ohm 1 watt units on hand. The two resistors can be connected in parallel to provide the 5,000 ohms at 2 watts. If you have a well-stocked junk box you'll probably find many combinations that will work in any particular circuit.

Circuit diagrams customarily specify the power ratings of the resistors required in a unit. It is, of course, OK to use resistors with a larger power rating than specified. Watch out for one thing, though: never substitute a resistor that has a power rating less than that called for.

Fixed resistors are supplied in two general types, wire-wound and composition. Never use the ordinary wire-wound type where it would have to carry r.f. Wire-wound resistors have an appreciable amount of inductance, which will upset the operation of an r.f. circuit.

If too much heat is used in soldering or unsoldering composition resistors, particularly the $\frac{1}{2}$ watt size, the resistance value can change. It is a good idea to check previously-used resistors with an ohmmeter before installing them in a piece of gear.

R.F. CHOKES

Another component that has wide use in radio equipment is the radio frequency choke. The inductance of an r.f. choke is intentionally made large, with respect to the inductance of a coil used in a tuned circuit, so that it offers a very high impedance at radio frequencies.

Examples of the use of r.f. chokes are shown in Fig. 1. RFC1 and RFC3 are connected in the d.c. leads to the plates of the tubes. These chokes prevent r.f. current from flowing back into the power supply. If a bypass capacitor alone was used for this purpose, the plate tank circuit would be bypassed and the amplifier wouldn't work. By installing the r.f. choke, the r.f. currents are prevented from flowing back into the supply but are not prevented from flowing to the tank circuit.

In transmitters in the 80 to 10 metre region chokes valued from 750 microhenrys to 2.5 millihenrys are commonly used. Tolerances are not "tight" and it is possible to substitute values and have the equipment perform as it is intended to do. In v.h.f. construction, on the other hand, it is a good idea to follow the designer's specifications as closely as possible.

In some cases an r.f. choke will work well on most bands but may have a self-resonance in one particular band. When this happens the choke acts as a power-absorbing tuned circuit and will develop "hot spots." If the power level is high enough the choke may actually burn out. A grid-dip meter can be used to check a choke for such resonances. Connect the two ends of the choke together with a short length of wire and couple the grid-dip meter to the choke. Tune the grid-dip meter through the bands you plan to use, and if there are any hot spots they'll show up as a dip in the meter reading.

POWER TRANSFORMERS

Two factors must be considered when deciding on a transformer substitution—the voltage and current ratings. Let's take current first. You can always substitute a transformer that has a current rating equal to or greater than that called for in the equipment. Transformer manufacturers usually design their transformers for continuous duty, not for Amateur service, which can be considered to be intermittent. This means that in many cases transformers used in Amateur equipment are underloaded rather than overloaded. Many designers of Amateur equipment know this and will take more power from a transformer than its rating ostensibly would allow.

TECHNICAL TOPICS

VALVES

PREWAR The Australian Amateur used mainly receiving valves in the final stage of his transmitter. Such types as the 45, 46, 47, 59 and E406 were in popular use.

In those days transmitting valves were expensive and in any case the Amateur was then restricted to a power of 25 watts, the receiving valves gave him all the power he could use. These receiving valves cost approximately from 12/- to £1 each and allowing for a basic wage rise of roughly 1 to 3 from then to now, the equivalent cost in today's money would be from £2 to £3 each.

Type 6P6, which was a receiving type 42 with the plate lead brought out to a top cap and a separate pin for the suppressor grid, was made in Australia for small transmitters and met most of the needs of prewar Amateurs.

After the war, large quantities of surplus valves became available and with the lifting of the allowable power, first to 50, later 100 watts, and now to 150 watts, the type 807 available at less than 10/- became almost universally used by Amateurs.

In the last year or so it seems that further stocks of surplus valves have become available at very low prices and the Amateur can now purchase both receiving and transmitting types at the equivalent of a small fraction of their prewar values.

For an Amateur building a receiver, here are some of the cheap valves available—

For r.f. and i.f. stages:

EF39, 6U7, 6K7, 12SK7, at from 3/- to 5/-.

Converter stage:

ECH35 10/6, 6K8 6/9, 7A8 3/6.

Detector:

6H6 1/6, 6C4 5/-.

Output:

7C5 5/-.

For the transmitter oscillator:

EF50, RL7, 1/6; 6AC7, 6SH7, 2/6.

Buffer-doubler:

7C5 5/-.

Final:

165 4/-, 809 5/6, 803 17/6.

Modulator speech amplifier:

7C7 1/11, 6C4 5/-.

Power amplifier:

1625 4/-, 809 5/6, VT127 £1 per dozen.

to use manufacturers' and distributors' catalogues as a reference guide. For example, you may have a wafer switch on hand and aren't sure that it will be suitable for use in an r.f. circuit. The manufacturer's catalogue will usually provide this information. The same holds true for voltage and current ratings of components. Additional information on the subject is contained in an excellent article by Geiser¹ on capacitors. Also, the Handbook section on components and color codes is a good reference.

¹ Geiser, "Choosing Capacitors," "QST," July, 1953.
"Choosing Condensers," "A.R.," July, 1959.

Rectifier:

NU12 4v. electrically equivalent to 5Z3, 1/6.

Valves that might be of special interest to the Amateur are:

7C7—a local base valve somewhat equivalent to 6SJ7.

7C5—electrically equivalent to 6V8, but with the short leads of the local base should be ideal for 56 Mc. r.f.

RL7—a hot bottle for the v.h.f. low-noise r.f. stage—uses EF50 sockets.

1625—a 12 volt 807 but has 7-pin base.

809—ideal for zero bias class B triode modulator. With 500 volts plate and 2.4 watts drive, a pair gives 60 watts output. With 750 volts plate and 5 watts drive, the output becomes 100 watts.

VT127—a beam tube with 4 volt heater and Mazda octal base which physically resembles the 807. Should be ideal for ABI or AB2 modulator but no data is available. At £1 per dozen one could afford to find what voltage the tube can handle by trial and error.

—J.A.G.

EDITORIAL

(Continued from Page 1)

In the v.h.f. and u.h.f. part of the spectrum there is likelihood of fixed assignments for Amateurs whereas previously they were either shared or granted by local administrative powers. This is purely assumption at present and may finally be changed, but that's the way the wind is blowing.

And so in 1960 we see the same pattern appearing as history has shown previously—once the bands become useful to the commercial users, the Amateurs are gradually squeezed out because they have the lowest priority of any frequency user. You—the Amateur—have one real answer to this predicament! Populate the bands you have, for in this coming jet and rocket age it will be only those who have a use for the bands who will have grounds for fighting to retain them.

However hard the pill is to swallow, this is undoubtedly the position Amateur Radio finds itself in today after its years of worthwhile contributions to the advancement of the science. If anyone has an idea that we have an unassailable right to the bands we have allocated to us for ever and anon, let him study closely the trends of other people's thinking and he will finally come back to the same point—use the bands or others will use them for you.

Take heed in 1960 for in 1970 the going will be even tougher. Put your transmitter on the air regularly; encourage others to do the same; encourage young people to take up Amateur Radio as a hobby; and encourage your friends to join the W.I.A. It's an old adage, but Unity is still Strength.

The Federal Executive and Federal Council of the Wireless Institute of Australia joins in wishing every Australian Amateur and Member a Prosperous New Year. Keep the signals radiating!

FEDERAL EXECUTIVE.

If you plan to substitute a transformer that has different ratings and are in doubt, there are a couple of ways of working out the problem. If the design tells you the total current requirements you can get a pretty good idea whether your substitution will work. However, this information isn't always furnished, and in such cases you'll have to estimate the total current by adding up the amounts taken by all the tubes.

While it is possible to take more than the rated current, intermittently, from the plate winding of a transformer without seriously overloading it, this is not generally true of the filament or heater windings because the tube filaments usually run continuously. As long as the filament winding rating in your substitute is equal to or greater than the actual heater current demanded by the tubes it is all right to use it. Incidentally, beginners frequently ask if it is OK to use a filament winding that has a greater current rating than is required for the tube or tubes they plan to use. For example, a tube may be rated at 6.3 volts, 1 amp, and the transformer can deliver 5 amperes at 6.3 volts. This doesn't mean that 5 amperes have to flow through the tube heater; the current will be only 1 ampere because that's all the tube will take when the proper voltage—6.3 volts—is applied to the heater. All that happens is that the transformer winding runs a lot cooler than it would if it were loaded to full capacity.

Where voltage ratings are concerned it is generally possible to substitute transformers that are not exactly the same as originally specified. For example, a transmitter circuit may call for a 400-0-400 volt transformer and you have one giving 350-0-350 on hand. The 350 volt transformer can be used, but the power input will be lower than it would have been with the higher voltage job. In most cases the difference will not be serious. It may be necessary to increase screen voltages to bring them back up to rating; this is usually a simple matter of reducing the screen-dropping resistance appropriately.

If the output voltage of the substitute transformer is too high, you can use voltage-dropping resistors or a voltage divider to bring the voltage down to what is required. But watch out for the possibility of exceeding filter-capacitor voltage ratings when you do this. The power supply section of the Handbook should be consulted for information of voltage dividers.

POWER SUPPLY CHOKES

As shown earlier, the inductance required in a power supply choke depends on the amount of capacitance used in the filter circuit. Here again, as with other components, there is plenty of flexibility. You are usually safe in substituting chokes that have a larger inductance than the one specified, without making any other changes in the filter circuit, as long as the choke has a similar current rating. As with transformers, the manufacturer's ratings on chokes are for continuous duty, so there is considerable tolerance available for Amateur service.

If you have any doubts about substituting certain components in particular applications it is a good idea



The WARBURTON FRANKI Page

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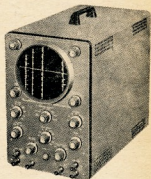
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8WR	8"	7	30-15k c.p.s.	£7/0/0	2/3	3/8
12WR	12"	10	30-15k c.p.s.	£7/9/7	2/11	4/4

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A SUBSTITUTE FOR TRANSISTORISED AUDIO IN 12 VOLT RECEIVERS

V. KERR,* VK4LK

WITHOUT question the transistor is supreme for the audio portion of the so called "hybrid receiver," however when costs are taken to account, that is driver and output transformers plus the cost of transistors, almost half of the total cost of a receiver goes for the audio portion.

Once the mobile-portable fraternity really recognise the convenience, plus efficiency, offered by the 12 volt type of valve, it goes without saying these will have a universal application for r.f. purposes in any receiver designed for mobile or portable use. If and when transistors do get on a comparable price level with the "humble valve," the mixture of both will no doubt be very desirable.

Recently the acquisition of a new jalopy with a 12 volt electrical system called for a review of the previous 6 volt "buzz box" which provided the necessary entertainment while motor-ing. It could have been converted for

*P.O. Box 180, Charters Towers, Qld.

12 volt vibrator operation without a great deal of effort. After taking into account the cost of a 12 volt vibrator transformer and vibrator, the decision was made to come into line with present trend for automobile receivers and make a "hybrid job" of it.

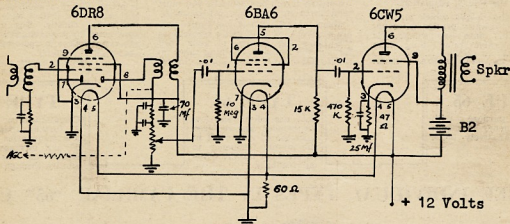
My "favourite wholesaler" was unable to supply the needs for a transistorised audio end without some delay, in the interim the r.f. portion of the receiver had been completed using the 12 volt types. Having an urge to see just how it performed after the change over, the output from the diode of the 6DR8 was fed into a conventional amplifier and tune up proceeded with.

Having got thus far, the thought struck me, if these high gm types do so well as r.f. amplifiers, why not see how they will fare as audio types on low voltage. Searching about, the 6CW5 appeared to be a suitable subject for trial. It was quite a surprise the amount of audio which it produced with

only 12 volts for plate and screen, however the addition of a 9 volt transistor battery, in series with the 12 volt supply (B2 in circuit diagram) really started the thing making real noise and without much apparent distortion. I might add it would be hardly fair to feed the output from the 6CW5 to a 3 or 4 inch speaker and expect good results. In my own case it is fed into a 9-7 speaker with a 2,500 ohm transformer between the 6CW5 and the voice coil of the speaker. All the values of resistors, etc., have been arrived at by cut and try methods, and the values shown have proved to give the best performance in this set-up. The 6BA6 is hooked up as a triode, otherwise things remain conventional.

The 60 ohm shunt resistor across the filaments of the 6DR8 and 6BA6, while not the correct value to match in with the 0.71 amp. filament of the 6CW5, appears to work quite satisfactorily in the series-parallel filament hook-up, this being the nearest to the correct value on hand it was naturally used.

To anyone who would like to try a receiver using the 12 volt types, I can recommend the inclusion of the audio portion as detailed, thus saving quite an amount when compared with the cost of a fully transistorised audio portion.



THE AR7 AND S.S.B.

(Continued from Page 3)

with the audio volume control. In many instances best results are obtained with the r.f. control right off.

No bandspreading has been applied to the 3.5 Mc. band as, so far, it has not been found necessary.

Due to the large bandspread on 7.0 Mc., there is an apparent lack of selectivity. This is typical with all systems using such a large amount of bandspread and a 455 Kc. i.f. system. The crystal filter of the AR7 will help a lot and the receiver's i.f. channel should be lined up with the crystal, which is nominally on 455 Kc. Changing crystals can cause a lot of poor reception when the filter is in use and each set should be adjusted with its own crystal in circuit. Replacing the second and third i.f. transformers with the latest Agis high selectivity transformers will

also help. The crystal filter input transformer should not be replaced unless a satisfactory replacement is available.

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A Command Q5'er, connected to the grid circuit of the 2nd i.f. stage by twisting a couple of turns of wire around the grid lead will work wonders as far as selectivity is concerned. However, it will probably be found that under the condition of extreme selectivity that is then obtained the tracking of the AR7 is not perfect. A similar check on a lot of other receivers will reveal the same thing.

Finally, remember that a receiver is only as good as its operator and these modifications will make the operator's life a lot easier and allow him to get more enjoyment from his receiver, the old faithful AR7.

REFERENCES

1. "Modifying the AR7," "Amateur Radio," May, June, July, August, September, 1957; December, 1958; January, 1959.
2. "Amateur Radio," April, 1958.
3. "Radiotron Designer's Handbook," pages 662 and 663.

QSL'ING

B. J. SMYTH,* WIA-L2001

THE world over, at a conservative estimate, there are five times as many s.w.l.'s. as transmitters. The majority of these s.w.l.'s. are interested in getting QSL cards from the transmitting station. The result is that there is a heavy flow of s.w.l. reports. Considerable thought should be given to a number of things when s.w.l.'s. consider their method of sending QSL cards. It is a well known fact that to obtain a verification from a b.c. station your report must include part of their programme details at the time you heard them.

Many Amateurs do not QSL, are not interested in receiving QSLs even from fellow Amateurs, and consequently do not have a QSL card, so what hope has a s.w.l. got? But that is a calculated risk you must take.

Methods of reporting an Amateur signal must not be haphazard, and you are faced with a number of problems. Design your card so that it will fit on a size of $5\frac{1}{2}'' \times 3\frac{1}{4}''$, which will fit in a normal envelope. If you make them large they cannot be sent at post-card rate because they will exceed the size allowed by the P.M.G. regulations.

Have all the details which an Amateur wished to know printed wherever possible. This does two things. He saves considerable time filling them

* 25 Mintaro Ave., South Strathfield, N.S.W.

out and permits you to post them at commercial paper rate. Do not send a report to a DX station who is in QSO with your next door neighbour. He already knows he is getting to your location, but preferably report on a QSO between two stations in entirely different countries to your own. Do not report to a station that you heard calling CQ. Unless he has never worked an Australian station before, he will not be interested and he is almost certain to have no log entry anyway.

EXAMPLE OF QSL CARD AUSTRALIA	
To Radio	W.I.A.
Shortwave Listeners' Group, N.S.W. Div.	
SWL Report on your	Mc. contact at GMT
with	Your Signals were RST
My Rx	My Ant.
Remarks	
Pise QSL Direct or Via Bureau. 73	
B. J. Smyth, 25 Mintaro Avenue, South Strathfield, N.S.W.	

Size of card: $5\frac{1}{2}'' \times 3\frac{1}{4}''$ inches.

Suggest W.I.A. Badge and Listener Number be overprinted in Red, printing in Prussian Blue on a buff coloured card.

If you wish to send your QSL cards via the W.I.A. Bureau you unfortunately cannot add personal remarks to your QSL as they become a branch of P.M.G. regulations for commercial papers, so if you add remarks you must send them through the post yourself.

Keep the call sign of the station you are reporting clear of other remarks as this helps the passage of your card through the Bureaux. Nothing slows up sorting QSL cards more than trying to

find the call of the station to whom it is going. Make the call sign clear and definite and save mis-routing. One important factor in reporting is to use G.M.T. always. Can you readily write down what E.S.T. in U.S.A. or Central European time is at any particular local time? But it's easy in G.M.T. to convert to local time.

In conclusion, make the reports you do send as careful and comprehensive as possible. Look for stations not able to raise DX. Get your reports out on the bands difficult for DX, like 80 and 40 metres.

One final word of warning! Please refrain from adding personal remarks on QSL cards if forwarding by the Bureaux and avoid the disappointment of having your cards returned by the P.M.G. officials.

ACKNOWLEDGMENT

I wish to thank Frank Hine, VK2QL, the N.S.W. Division QSL Bureau Manager, for his help in assisting me compile these notes.

HINTS AND KINKS

DRILLING HINT

When modification of a unit includes drilling holes in its steel chassis, the following trick can often save trouble that might follow after the modification is made. Insert a small magnet under the area to be drilled and, if possible, inside the chassis. The magnet will catch the steel shavings which might otherwise collect in spots and endanger the original circuitry.

—J. Wimmer, W6RPX, "QST," Mar. '59.

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W.A.A. OFFICIAL LIST OF COUNTRIES FOR DXCC PURPOSES

The list of countries hereunder (as at 1/1/60) and as amended from time to time in Federal Awards Notes is the Official List to be used in connection with the issue of the Australasian DXCC Award.

The list below shows first the Prefix, the Country, and the Zone Numbers in parenthesis (as used for "CQ" WAZ award).

AC3-Sikkim	(22)	FY7-Fr. Guiana & Inini	(39)
AC4-Tibet	(23)	G-England	(14)
AC5-Bhutan	(22)	GC-Channel Is.	(14)
AP2-Pakistan	(21, 22)	GD-Isle of Man	(14)
BV (C3)-Formosa	(24)	GI-Northern Ireland	(14)
C-China	(23, 24)	GM-Scotland	(14)
C3-(See BV)		GW-Wales	(14)
C9-Manchuria	(24)	HA-Hungary	(15)
CE-Chile	(12)	HC-Switzerland	(14)
VF8, ZLS, etc.—		HE-Ecuador	(10)
Antarctica	(13, 29, 30)	HEC-Galapagos Is.	(10)
CE9-(See VP8)		HE-Liechtenstein	(14)
CE0-Easter Is.	(12)	HH-Haiti	(8)
CE0-Juan Fernandez		HI-Dominican Repub.	(3)
Archipelago	(12)	HK-Hong Kong	(9)
CM, CO-Cuba	(8)	HK0-Archipelago of San	
CN2-Tangier	(33)	Andres & Providencia	(9)
CN8-Morocco	(33)	HL-Korea	(25)
CP-Bolivia	(10)	HP-Panama	(7)
CR4-Cape Verde Is.	(35)	HR-Honduras	(7)
CR5-Port. Guinea	(35)	HS-Thailand	(26)
CR5-Principe, Sao		HV-Vatican City	(15)
Thome	(36)	HZ-Saudi Arabia	(21)
CR6-Angola	(36)	II, IT1-Italy	(15)
CR7-Mozambique	(37)	IL-Trieste	(15)
CR8-Goa	(22)	I5-Italian Somaliland	(37)
CR9-Macau	(28)	ISI-Sardinia	(15)
CT1-Port. Timor	(28)	JA, KA-Japan	(25)
CT1-Portugal	(14)	JT1-Mongolia	(23)
CT2-Azores	(14)	JY-Jordan	(20)
CT3-Madeira Is.	(33)	JZ0-New Guinea	(23)
CX-Uruguay	(13)	K, W-United States of	
DJ, DL, DM-Germany	(14, 15)	America	(3, 4, 5)
DU-Philippine Is.	(27)	KA-(See JA)	
EA-Spain	(14)	KA0-KG61-Bonin and	
EA6-Baleares Is.	(14)	Volcano Is.	(27)
EA8-Canary Is.	(33)	KB6-Baker, Howland and	
EA9-Irni	(33)	American Phoenix Is.	(31)
EA9-Rio de Oro	(33)	KC4-(See CE9)	
EA9-Span. Morocco	(33)	KC4-Navassa Is.	(8)
EA0-Spanish Guinea	(35)	KC6-East. Caroline Is.	(27)
EL-Eire	(14)	KC6-West. Caroline Is.	(27)
EL-Liberia	(35)	KG1-(See OX)	
ET2-Eritrea	(37)	KG4-Guantanamo Bay	(8)
ET3-Ethiopia	(37)	KG6-Mariana Is.	(27)
F-France	(14)	KG61-(See KA0)	
FA-Algeria	(33)	KH6-Hawaii	(31)
FB8-Amsterdam and		KJ6-Johnston Is.	(31)
St. Paul Is.	(39)	KL7-Alaska	(1)
FB8-Comoro Is.	(39)	KM6-Midway Is.	(31)
FB8-Kerguelen Is.	(39)	KP4-Puerto Rico	(8)
FB8-Madagascar	(39)	KP6-Palmyra Group,	
FB8-Tragelini Is.	(39)	Jarvis Is.	(31)
FC-Corsica	(15)	KR6-Ryuku Is.	(25)
FD-Togo	(35)	KS4-Swan Is.	(7)
FE8-Fr. Cameroons	(36)	KS4-Roncador Cay and	
FE8-Fr. West Africa	(35)	Serrana Bank	(7)
-Repub. of Guinea	(35)	KS6-American Samoa	(32)
FG7-Guadeloupe	(8)	KV4-Virgin Is.	(8)
FK8-New Caledonia	(32)	KW6-Wake Is.	(31)
FL8-Fr. Somaliland	(37)	KX6-Marshall Is.	(31)
FM7-Martinique	(8)	KZ5-Canal Zone	(7)
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FO8-Fr. Oceania	(32)	LA-Norway	(14)
FP8-St. Pierre and		LA-Svalbard	(14)
Miquelon Is.	(5)	LU-Arentina	(13)
FR8-Fr. Equat. Africa	(38)	LU-Z-(See CE9, VP8)	
FR8-Reunion Is.	(39)	LX-Lieppeurg	(14)
FS7-St. Martin Is.	(8)	LZ-Bulgaria	(20)
FU8, YJ-New Hebrides		M1-San Marino	(15)
Is.	(32)	MP4-Bahrein Is.	(21)
FW8-Wallis & Futuna		MP4-Qatar	(21)
Is.	(32)	MP4-Trucial Oman	(21)
		OA-Peru	(10)

OD5-Lebanon	(20)	VP6-Barbados	(9)
OE-Austria	(15)	VP7-Bahama Is.	(8)
OH-Finland	(15)	VP8-(See CE9)	
OH0-Aland Is.	(13)	VP8-Falkland Is.	(13)
OK-Czechoslovakia	(15)	VP8, LU-Z-South	
ON4-Belgium	(14)	Georgia	(13)
OQ5, 0-Belgian Congo	(36)	VP8, LU-Z-South Ork-	
OX, KG1-Greenland	(40)	ney Is.	(13)
OY-Faroes	(14)	VP8, LU-Z-South Sand-	
OZ-Denmark	(14)	wich Is.	(13)
PA0, PI1-Netherlands	(14)	VP8, LU-Z, CE9AN-AZ-	
PJ-Neth. West Indies	(9)	Sth. Sheland Is.	(13)
PJ2M-Sint Maarten	(9)	VP9-Bermuda	(5)
PX-Andorra	(14)	VQ1-Zanzibar Is.	(37)
PY-Brasyl	(11)	VQ2-Nth. Rhodesia	(36)
PY0-Fernando de		VQ3-Tanganyika Terr.	(37)
Naronha	(11)	VQ4-Kenya	(37)
PY0-Trindade and Vaz		VQ5-Uganda	(37)
Is.	(11)	VQ6-Fr. Somaliland	(37)
PZ1-Neth. Guiana	(9)	VQ8-Chagos Is.	(39)
SM-Sweden	(14)	VQ8-Mauritius	(39)
SP-Poland	(13)	VQ8-Rodriguez Is.	(39)
ST2-Sudan	(34)	VQ9-Seychelles Is.	(39)
SU-Egypt	(34)	VR1-Br. Phoenix Is.	(31)
SV-Crete	(20)	VR1-Gilbert & Ellis Is.	
SV-Decanese	(20)	Ocean Is.	(31)
SV-Greece	(20)	VR2-Fiji Is.	(32)
TA-Turkey	(20)	VR3-Fanning & Christ-	
TF-Iceland	(40)	mas Is.	(31)
TG-Guatemala	(7)	VR4-Br. Solomon Is.	(28)
TI-Costa Rica	(7)	VR5-Tonga Is.	(32)
TI9-Cocos Is.	(7)	VR6-Pitcairn Is.	(32)
UA1, 2, 3, 4, 6-European		VS1-Singapore	(28)
R.S.F.S.R.	(15, 16, 17)	VS4-Sarawak	(28)
UA1-Franz Josef Land	(40)	VS5-Brunel	(28)
UA9, 0-Asiatic Russian		VS6-Hong Kong	(24)
S.F.S.R.	(17, 18, 19, 25)	VS9-Aden & Socotra	(21)
UA0-Wrangell Is.	(19)	VS9-Maldives Is.	(21)
UB5-Ukraine	(16)	VS9-Sultanate of Oman	(21)
UC2-White Russian		VU2-India	(22)
S.S.R.	(16)	VU4-Laccadive Is.	(22)
UD-Azerbaijan	(21)	VU5-Andaman & Nico-	
UF6-Georgia	(21)	bar Is.	(26)
UG6-Armenia	(21)	W-(See K)	
UR8-Turkoman	(21)	XE, XF-Mexico	(6)
UI8-Uzbek	(17)	XE4-Revilla Gligedo	(6)
UJ8-Tadzhik	(17)	XV-Viet Nam	(26)
UL7-Kazakh	(17)	XW8-Laos	(26)
UM8-Kirghiz	(17)	XZ2-Burma	(26)
UN1-Karelo-Finnish	(16)	YA-Afghanistan	(21)
UO5-Moldavia	(16)	YI-Iraq	(21)
UP2-Lithuania	(15)	YJ-(See FU)	
UQ2-Latvia	(15)	YK-Syria	(20)
UR2-Estonia	(15)	YN-Nicaragua	(20)
VE, VO-Canada	(2, 3, 4, 5)	YO-Roumania	(20)
VK-Australia	(29, 30)	YU-Salvador	(7)
VK2-Lord Howe Is.	(39)	YU-Yugoslavia	(15)
VK3-Cocos Is.	(29)	YV-Venezuela	(9)
VK9-Nauru	(28)	YV0-Aves Is.	(9)
VK9-Norfolk Is.	(32)	ZA-Albania	(15)
VK9-Papua	(28)	ZB1-Malta	(15)
VK9-Ter. of New Guin.	(28)	ZB2-Gibraltar	(14)
VK0-(See CE9)		ZC3-Christmas Is.	(29)
VK0-Heard Is.	(30)	ZC4-Cyprus	(20)
VK0-Macquarie Is.	(30)	ZC5-Br. Nth. Borneo	(28)
VO-(See VE)		ZC6-Palestine	(20)
VP1-Br. Honduras	(7)	ZD1-Sierra Leone	(35)
VP2-Anguilla	(8)	ZD2-Nigeria	(35, 36)
VP2-Antigua, Barbuda	(8)	ZD3-Gambia	(35)
VP2-Br. Virgin Is.	(8)	ZD6-Nyasaland	(37)
VP2-Dominica	(8)	ZD7-St. Helena	(36)
VP2-Grenada & Dep.		ZD8-Ascension Is.	(36)
VP2-Montserrat	(8)	ZD9-Tristan da Cunha	
VP2-St. Kitts, Nevis	(8)	and Cook Is.	(38)
VP2-St. Lucia	(8)	ZR-St. Rhodesia	(36)
VP2-St. Vincent and		ZK1-Congo	(32)
Dependencies	(8)	ZK1-Manihiki Is.	(32)
VP3-British Guiana	(9)	ZK2-Niue	(32)
VP4-Trinidad & Tobago	(9)	ZL-Chatham Is.	(32)
VP5-Jamaica	(9)	ZL-Kermadec Is.	(32)
VP5-Turks & Caicos Is.	(8)		

(Continued on Page 15)



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PREDICTION CHART, JAN. '60

Mo.	E. AUSTRALIA — W. EUROPE S.R.													Mc.
0	2	4	6	8	10	12	14	16	18	20	22	24		
45	GMT													45
28														28
21														21
14														14
7														7
E. AUSTRALIA — W. EUROPE L.R.														
0	2	4	6	8	10	12	14	16	18	20	22	24		
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28														28
21														21
14														14
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E. AUSTRALIA — MEDITERRANEAN														
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14														14
7														7
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14														14
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E. AUSTRALIA — N.E. U.S.A. L.R.														
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E. AUSTRALIA — CENTRAL AMERICA														
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E. AUSTRALIA — S. AFRICA														
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E. AUSTRALIA — FAR EAST														
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W. AUSTRALIA — W. EUROPE														
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W. AUSTRALIA — N.W. U.S.A.														
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W. AUSTRALIA — S. AFRICA														
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W. AUSTRALIA — FAR EAST														
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The Receiver Method of Phasing Alignment

STAN BOURKE,* VK2EL

CONTRARY to popular belief, it is possible to do a very good job of aligning a phasing s.s.b. transmitter using nothing more than the station receiver, a simple audio oscillator, and a fair supply of patience.

Before we proceed, let's review the sideband theory very briefly (Figs. 1 to 4).

Fig. 1 represents an unmodulated c.w. signal or carrier on your pet frequency. If we now modulate this carrier with, say, a 1,000 cycle tone we will get the familiar picture of Fig. 2, with the two a.m. sidebands spaced a kilocycle up and down from the original frequency. Since s.s.b. is just an ordinary a.m. signal with the carrier and one sideband taken out, we get the pictures in Figs. 3 and 4, depending upon which side is being used. Nearly all phasing alignment methods make use of this idea that a single audio tone will produce just one signal when the transmitter is properly adjusted.

Plenty of information has been published on how to do this with an oscilloscope, but it can be a rather bewildering experience, the first time you look for one of those "minimum ripple patterns." Despite the helpful information it's really not too easy to decide whether carrier, other sideband, audio harmonics or something else is causing this or that ripple. Most scopes can't synchronise on an r.f. signal either, so you have to ride hard on the fine frequency control at the same time you are making other adjustments and the whole business could get bad enough to worry an adept octopus!



Many sideband converters are old c.w. bounds and for you this receiver method should be old hat. A.m. chaps may have to concentrate a little harder, but the whole operation is much harder to describe than to carry out.

To try yourself out turn on the station receiver and look at WWV whilst they are playing the 600 cycle tone. Put the b.f.o. on and set it near the middle of your i.f. passband. Now tune very slowly through the signal, ignoring the ticks. If you can pick out the three separate signals or beats you will have no trouble at all. If you have selectivity to spare by all means use it both now and later when we get down to business, but you can manage with a standard i.f. strip if you have to. You don't have to have super selectivity if you can mentally sort out beat notes whilst others of different frequencies are present, as we do often in c.w. QRM.

Here is a block diagram (Fig. 5) of the most usual type of phasing transmitter. I have included this to help to identify the controls I will mention, but I'm sure you will have no trouble in applying the principle if your own transmitter differs from this.

Let us assume that your new transmitter is finished and ready for alignment. You will need a simple audio oscillator having a reasonably good waveform, such as the one in Lester's (ZL1AAX) article in this magazine (July 1959) or "CQ" July 1958 (VK-2AC). Please be careful not to overdrive anything with the tone.

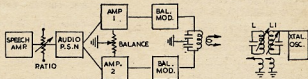


FIG 5

From here on I will try to summarise the steps:

- (1) Carefully balance carrier out. The controls will interact a little and the dip will be fairly sharp, but it should go away down in the mud.
- (2) Apply 1,000 cycle tone (keep level low).
- (3) Set audio balance control to about centre of its range.
- (4) Tune slug in L1 about one turn out from point where crystal starts to oscillate. You have now finished with this one.
- (5) Tune the slug of L2 about one turn in beyond the resonant frequency of the crystal.

Tune the receiver slowly across the frequency with the b.f.o. on—you should hear the two sideband signals and they will be fairly easy to separate as they will be two kilocycles apart. If all is well, one will be quite a bit louder than the other one. Pick on the big fellow and tune your receiver so that you have him at, say, a 200 cycle note and good and loud. At this point remember that the carrier will be about a one kilocycle note and the other sideband will be about two kilocycles away. Both will be a lot weaker than the one you have got your ear on (Fig. 4).

Now switch the sideband switch in the transmitter without touching anything else. Your 200 cycle growl should drop in level. Reach for two screwdrivers and apply them to the ratio and L2 controls. Get one driver in each hand and you will very quickly find a very sharp and almost complete null. Ignore what the higher pitched signals are doing meanwhile—you're not listening to them, are you? Re-balance the carrier (it will come unstuck a little each time you tune L2) and then go hunting for a good loud signal with your receiver. You will find it about

two kilocycles away and you should tune for your 200 cycle beat note again. Put the sideband switch in the transmitter back to the first position. Again, the 200 cycle signal will drop, but, unless you are very lucky, it won't go right out. Take careful note of just where ratio and L2 controls are set now and go into the two-screwdriver act again. You will find new spots close by where you will be able to lose the signal you are now concentrating upon. Try to split the difference between these and the first settings and try adjusting the audio balance control. Your object is to get a perfect null each

way round with all adjustments coinciding. Be prepared to switch and re-tune several times to get it just right.

Avoid the temptation of trying to favour the sideband you will be mostly using. You can get perfect suppression of a single tone on one sideband and have none elsewhere. The careful compromise seems to give best all round results.

BOUND VOLUMES OF "A.R."

In response to inquiries, the Publications Committee of the Wireless Institute of Australia has made available a number of bound volumes of "Amateur Radio" containing the twelve issues for 1959. These volumes cost 25/- (including postage) and can be obtained by forwarding the above amount to the W.I.A., Victorian Division, P.O. Box 36, East Melbourne, C.2, Victoria.

If you require your own copies bound into one volume, send, or deliver, your file of magazines, together with a slip plainly marked with your name and full address (block letters) to the office of the "Richmond Chronicle," Shakespeare Street, Richmond, E.1, Victoria. The cost of this service is 7/6, including return postage to anywhere in Australia, and this amount should be remitted when forwarding your magazines.

REQUEST TO ADVERTISERS

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Thank you.

Advertising Manager,
"Amateur Radio."

* 17 Clisdell Avenue, Canterbury, N.S.W.

NATIONAL FIELD DAY, 1960

RECEIVING SECTION

The rules shall be the same as for the transmitting stations and is open to all Short Wave Listeners in the Commonwealth and Mandated Territories.

Logs shall take the same form as for transmitting sections, but will omit the serial number received. Logs must show the Call Sign of the Station Heard, the Serial Number Sent by it, and the Call Sign of the Station being worked.

Scoring will be on the same basis as for transmitting stations. It will not be sufficient to log stations calling CQ. A station may be logged once only for phone and once for c.w. in each band.

Awards.—Certificates will be awarded for the highest scores in each Call Area.

THE proposed rules for the N.F.D. Contest for 1960 have been agreed to by all States, but, in accordance with comments and suggestions received by the Federal Contest Committee, a few alterations have been made to increase the attractiveness of the Contest. The revised and final rules are printed below.

It will be seen that a section has been added for fixed stations and that a separate section has been provided for multiple operator stations. Also the duration of the Contest has been reduced to eliminate the all-night session on Saturday night and to allow more time for packing up and returning home on Sunday.

As the rules stand now, it is possible for every Amateur to enter either individually or as a member of a group, and if he chooses to stay home and work the portable stations there is a section for him to contest.

There should be plenty of stations for the portable stations to work as they can work anyone and count every contact—provided, of course, that they obtain a serial number from the other party. It is now up to all those who have portable or mobile equipment to set it up in the field and show just what can be done by Amateurs away from their own home location. So what about making an effort this year and popularise this Contest as never before?

DATE: Saturday and Sunday, 13th and 14th February, 1960.

DURATION: Saturday 1800 to 2300 hrs., Sunday 1000 to 1600 hours.

OBJECTS: The Operators of Portable and Mobile Stations within the Commonwealth and Mandated Territories will endeavour to contact other Portable/Mobile and Fixed Stations.

RULES

1. There shall be five sections to the Contest:—

- Portable/Mobile Transmitting, Phone.
- Portable/Mobile Transmitting, C.W.
- Portable/Mobile Transmitting, Multiple Operators, Open only.
- Fixed Transmitting Stations working Portable/Mobile Stations, Open only.
- Reception of Portable/Mobile Stations.

2. All Australian Amateurs may take part. Mobile or Portable Stations shall be limited to an input of 25 watts to the final stage. This power shall not be derived from any public or private mains.

A Portable/Mobile Station shall not be located within a radius of one mile from the home(s) of the operator(s), nor be situated in any occupied dwelling or building.

Portable/Mobile Stations may be moved from place to place during the Contest.

No apparatus shall be set up on the site selected earlier than 24 hours prior to the Contest.

All Amateur bands may be used, but no cross-band operation is permitted.

3. Amateurs may enter for either (a) or (b), or both, in the Portable/Mobile Sections.

4. One contact per station for phone and one for c.w. per band shall be permitted.

5. Entrants must operate within the terms of their licenses and in particular observe the Regulations with regard to portable operation.

6. Serial numbers consisting of the RS or RST report plus three figures commencing with any number between 001 and 100 and increasing by one for each successive contact shall be exchanged.

7. Scoring:—

(a) **Portable/Mobile Stations:**

For contacts with Portable/Mobile Stations outside entrant's call area

15 points.

For contacts with Portable/Mobile Stations within entrant's call area

10 points.

For contacts with Fixed Stations outside the entrant's call area

5 points.

For contacts with Fixed Stations within the entrant's call area

2 points.

(b) **Fixed Stations:**

For contacts with Portable/Mobile Stations outside entrant's call area

15 points.

For contacts with Portable/Mobile Stations within entrant's call area

10 points.

8. The following shall constitute call areas: VK1 (A.C.T.) and VK2 combined, VK3, VK4, VK5, VK6, VK7, VK9, and VK0.

9. **Logs.**—All logs shall be set out under the following headings: Date/Time, Band, Emission, Call Sign, RST/No. Sent, RST/No. Received, Points Claimed.

In addition, there shall be a front sheet showing the following information:—

Name..... Address.....

Call Sign..... Section.....

Call Signs of other Operators (if any).....

Location of Portable/Mobile Station.....

..... From..... hrs. to..... hrs.

..... From..... hrs. to..... hrs.

A brief description of equipment used, bands used, and points claimed, and the following declaration:

"I hereby certify that I have operated in accordance with the Rules and the spirit of the Contest."

Signed..... Date.....

10. The right is reserved to disqualify any entrant who, during the Contest, has not observed the Regulations or who has consistently departed from the accepted code of operating ethics.

11. The decision of the Federal Contest Committee of the W.I.A. is final, and no disputes will be entered into.

12. Certificates will be awarded to the highest scorer in each section in each call area.

RETURN OF LOGS

All entries must be post-marked not later than Saturday, 28th February, 1960, and addressed to the Federal Contest Committee, W.I.A., Box 371B, G.P.O., Hobart, Tasmania.

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SOME CHARACTERISTICS OF VALVES AT LOW VOLTAGES

D. MOLLER*

With the intentions of one day going mobile, I found the article by H. F. Ruckert, VK2AOU, in September "A.R." very interesting. As a result I decided to check the characteristics of several valve types at low voltages. The equipment (an Avo Mutual Conductance Valve Tester) had a minimum voltage of 20 volts for anode and screen. However, the results obtained at this voltage may give some indication of their characteristics at 12 volts.

I first tested the valves under normal operating conditions with the following results (published valve data conditions and mutual conductance for comparison). Note in the following tables, T. means Tested; P., Published.

Anode Volts	Screen Volts	Grid Volts	Anode mA.	Mutual Conduct.
6AK5—				
T. 150	150	-2.5	9.0	6000
P. 150	140	-3	7.0	4300
T. 150	100	-2	5.0	5100
P. 120	120	-2	7.5	5000

5654/6AK5W—				
T. 150	150	-2.5	12.0	6250
T. 150	100	-2	5.3	5100

6AH6—				
T. 300	150	-2	13.0	10000
P. 300	150	-2	10.0	9000

6AU6—				
T. 250	150	-1	9.6	6000
P. 250	150	-1	10.8	5200
T. 250	150	-2	4.9	4200
P. 250	150	-2	6.0	3950
T. 100	100	-1	4.2	4600
P. 100	100	-1	5.2	3900

6BA6—				
T. 250	100	-1	11.2	4700
P. 250	100	-1	11.0	4400
T. 100	100	-1	10.9	4550
P. 100	100	-1	10.8	4300

EF93—				
T. 250	100	-1	9.2	4000
T. 100	100	-1	9.0	3900

6AM6—				
T. 250	250	-2	13.0	8500
P. 250	250	-2	10.0	8200
T. 200	150	-1.5	5.8	7000
P. 200	150	-1.5	4.0	6400

8D3/6AM6—				
T. 250	250	-2	12.3	8500
T. 200	150	-1.5	4.5	6600

Although all valves were new, where two valves of the same type (6BA6, EF93) (6AM6, 8D3) (6AK5, 5654) were tested, variation in results occurred, the valves showing similar differences on the low voltage tests, results of which are as follows (the three columns are grid voltage, anode current and mutual conductance respectively):

*Member Townsville Amateur Radio Club; Base Sqn., R.A.A.F. Base, Townsville, Qld.

6AK5—			
Plate 40v., Screen 20v.	Eg	Ip	Gm
	-1.0	0.3	2550
	-0.8	0.7	2950
	-0.6	1.5	3600
	-0.5	1.8	3650
	-0.4	2.0	3550

5654—			
Plate 40v., Screen 20v.	Eg	Ip	Gm
	-1.0	0.3	1250
	-0.8	0.8	1550
	-0.6	0.5	2250
	-0.4	0.5	2600
	-0.2	1.0	3050
	-0.1	1.2	3400

6AH6—			
Plate 40v., Screen 20v.	Eg	Ip	Gm
	-0.6	0.25	2500
	-0.4	0.25	3000
	-0.3	0.6	3650
	-0.2	0.9	3750
	-0.1	1.2	3650

6AU6—			
Plate 40v., Screen 20v.	Eg	Ip	Gm
	-0.8	0.1	1450
	-0.6	0.2	2200
	-0.4	0.3	2600
	-0.3	0.5	2700
	-0.2	0.8	2650

6BA6—			
Plate 40v., Screen 20v.	Eg	Ip	Gm
	-1.0	0.5	1800
	-0.8	0.8	1850
	-0.6	1.0	2250
	-0.4	1.4	2250
	-0.2	1.9	2150

EF93—			
Plate 40v., Screen 20v.	Eg	Ip	Gm
	-0.8	0.1	1100
	-0.6	0.5	1450
	-0.4	0.5	1600
	-0.2	0.9	1800
	-0.1	1.0	1950

6AM6—			
Plate 40v., Screen 20v.	Eg	Ip	Gm
	-1.0	0.1	1850
	-0.8	0.2	2150
	-0.7	0.3	2600
	-0.6	0.6	3100
	-0.4	1.0	3250
	-0.3	1.5	2850
	-0.2	1.7	2750

8D3/6AM6—			
Plate 40v., Screen 20v.	Eg	Ip	Gm
	-1.0	0.1	1450
	-0.8	0.1	1700
	-0.7	0.2	2150
	-0.6	0.6	2600
	-0.4	0.5	2950
	-0.3	1.0	3000
	-0.2	1.1	2900

Note.—With grid bias of -0.2v., neither of the latter two tubes would operate.

From these results there would seem to be no way to estimate the results of valve operation at low B+ voltages, other than by actual experiment with the valves in the circuits in which they are intended to operate.

I.T.U. REPRESENTATIVE ILL

It is with great concern that the announcement is made that John Moyle, VK2JU, officially accredited W.I.A. representative with the Australian Delegation to the Extraordinary Administrative Radio Conference in Geneva, is gravely ill.

He had symptoms of a serious illness in the last few weeks in Geneva and on medical advice postponed his proposed onward journey through the U.S.A. and the U.K. on behalf of his Company returning to Australia immediately where he was immediately admitted to hospital.

At the time of going to press with this issue of the magazine the news is not good. An operation was performed, the result of which did not come up to expectations. If John is able to leave hospital it is doubtful whether he will be able to resume work again.

John put his heart and soul into the job for his three months with the Delegation and did not spare himself in his efforts to have the Amateur bands retained for Australian Amateurs. For this we shall be forever grateful and at this time we extend to his family and the Directors of his Company our sincere wishes for his rapid recovery.

— — — —

TECHNICAL ARTICLE AWARD

The Publications Committee has pleasure in announcing that the Technical Article Award for 1959 has been made to Mr. R. E. W. May, VK1PM, for his article "Plate Modulated D.S.B.R.C. or D.S.B.S.C."

As Technical Articles are in short supply, the Committee would appreciate receipt of an article on your latest experiments.

— — — —

MISSING NOTES

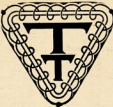
Apparently some correspondents failed to note the earlier closing date of this issue. Copy should be in our hands by the 8th of each month, except December when the date is advanced to the 1st of that month so that the January issue can be printed prior to the Xmas holidays.

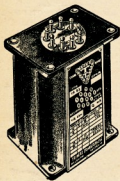
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W.I.A. Official List of Countries for DXCC Purposes

(Continued from Page 11)

ZL—New Zealand	(32)
ZL5—(See Ceylon)	.....
ZM6—Br. Camero	.....	(32)
ZM7—Tokelau Is.	.....	(31)
ZP—Paraguay	.....	(11)
ZS1, 2, 4, 5, 6—Union of S. Africa	.....	(38)
ZS2—Prince Edward & Marion Is.	.....	(38)
ZS3—South West Africa	.....	(38)
ZS7—Swaziland	.....	(38)
ZS8—Basutoland	.....	(38)
ZS9—Bechuanaland	.....	(38)
3A—Monaco	.....	(14)
3V8—Tunisia	.....	(33)
3W8—(See XV)	.....
4S7—Ceylon	.....	(22)
4W1—Yemen	.....	(21)
4X4—Israel	.....	(20)
5A—Libya	.....	(34)
9G1—Ghana	(35)
9K2—Kuwait	(21)
9M2—Malaya	(28)
9N1—Nepal	(22)
9S4—Saar	(14)
—Aldabra Is.	(39)

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As Father Time wraps up the year 1959 and it recedes into history, it is gratifying to look back on the good DX conditions that have prevailed. With the help of old Sol and his spots, and the many DXpeditions that have been undertaken, DX activities have reached new heights. We must now be past the peak of this cycle, and the time approaching, when the sunspots will become fewer and fewer, and DX will be harder to come by. This being the case, it will need more time and greater skill if we are to do bigger and better things in this new year.

All in all, 1959 seems to have been a very satisfactory DX year for most of us—and here at wishing you all the very best for an even better 1960.

NEWS AND NOTES

Walvis Bay, ZSO, and Q00 counts the same as South-West Africa ZS3 for DXCC award. MP4M—and VSP0—also only one country.

There should be more activity from Guatemala as Father Thomas Melville, ex-WZOPF, located in Soloma has been issued with the call sign TG8MR. Brother Pat, ex-YNACB, is active as TG9HC.

SM5RYV has left Spitzbergen, but his transmitter has been taken over by five others. Hams: LA5C/P, LA5AD/P, LA5T/P, LA5R/P, and LA5RG/P. Most working will be 1400-1430; c.w. with a little a.m. phone plus some 21 Mc. c.w. and a.m. QSLs should go via N.R.R.L.

JT1AB, Mongolia, has no QSL material in Prague, and all QSL cards should be sent direct to the address: Bobumil Kubac, JT1AB, Post Box 388, Ulan Bator, Mongolia. His cards will be sent through the Bureau.

It is reported that Rhodes will be represented on s.b. for a long time to come as SV0VY expects to be there for several years, probably.

Cargados Caraos, VQ9-B (St Brandon Is.), and Willis Islands off the Queensland Coast are now restricted to the A.M. 1400-1430. List, VQ9BBB is now active from Raphael Island of the Cargados Caraos Group, and VQ9APB will be there for the month of August. Hams: VK4JA is reported active from the Willis Islands.

Derek Linton, of Durban, South Africa, has announced an Anglo-African Trans-World DX-pedition. This world-wide tour is expected to take between 21 and 24 months. Six men in two four-wheel-drive trucks will cover about 10,000 miles which will be divided into six stages and is scheduled to leave Durban on the last day of 1959.

First stage: Durban to Bulawayo, Southern Rhodesia, via Johannesburg and the Belt Bridge. From Bulawayo, one vehicle goes to Salisbury, Southern Rhodesia, and the other to the Victoria Falls. They meet again at Lusaka, Northern Rhodesia, and from there continue through the Belgian Congo. Then Uganda through to Khartoum in the Sudan. They then drive down the Nile valley to Cairo and Alexandria. From Alexandria, they continue using the old 8th Army route. Moving on to Tangier, all gear will be shipped to Gibraltar and from there to London. From London, via Lisbon, Paris and Boulogne, across the English Channel to Dover and reach London about 15th March, 1960. This part of the journey will cost £14.00.

Second stage: Leave London middle of April for Paris, Berlin, Copenhagen, across to Scandinavia Finland on to Leningrad and Moscow, down to Vladivostok, across to Seattle, Alaska, Calcutta, Chumporn and Singapore. Arrive in Burma the second week of November. At Singapore they embark for Fremantle, via Djakarta.

The other four stages will cover Adelaide, Melbourne, Sydney, and most of the countries in South and North America.

Plans for the Andaman Islands Expedition and those in India will be VU2ANI's. Both phone and c.w. will be used.

* Call signs and prefixes worked.

† zero time—GMT.

Palmira Island—KH6EM, W7VEU and KT6IE are working on plans for another DXpedition to Palmira to put that island on the map, probably during January and February. Plans are still very tentative. (W7VEU).

The Radio Amateur Call Book Magazine is now printed in two volumes. One covers the W.K. stations and the other "Foreign."

The last mails for the Winter months left Spitzbergen during November, and the first in the new year will be May.

UA0KYA, Tannu Tuva, operating on 21 Mc. c.w. v.f.o., and a rough dining signal, is definitely legit. Whether it will count as UA0, JT1 or a separate country is waiting confirmation from A.R.R.L. DXCC department.

VK4DS is a new call that will be operating from Willis Island soon and will, of course, be counted as a new DXCC country.

There are three Hams on Christmas Island: Don VREY, Don VREW, and Roy VREX. They hope to form a club station in the near future. VREY is running 30 watts on 10 and 20. VREW is G3MKG and VREX is G3JHJ, both QSL only via R.S.G.B. VREW will QSL direct. George KH6UD is now active from Bangkok, Thailand, as HS1K. He may be found on 14,300 Kc. s.b. at about 1000.

PW2KW, of St. Kitts, is now on phone, crystal controlled, with a frequency of 21184 Kc. VFE2L will make a DXpedition to Montserrat in February or March.

In the October "QST" the VK c.w. DXers get a put on the back from the operators of Theodor's DXCC. Theodor's DXCC is a Top group honors for operating excellence should go to the VKs on c.w. and the VP9s on phone. These are as good a group as excellent. It is a pleasure to work these. (22)

VU2NR of Hyderabad is going to Fort Blair for a month commencing December 25. His call sign will be VU2LH and will operate on 14, 21 and 28 Mc. He wishes to work as many stations as possible. Operating rates: 21 Mc. phone, 6500 to 6700; 28 Mc. phone, 1100 to 1200; 28 Mc. c.w. a.m. and s.b., 1200 to 1400. (2ADL)

Port Blair is evidently in the Andaman and Nicobar Group, Capt. Carsten, of the Flying Enterprise II, WZXXM/AM, informed VK2AQJ that VU2ANI would be in that Group over the period as given by VK2ADL.

ACTIVITIES

3.5 Mc. Phone
1202Z: C1WAI, K3EKO, KH6, K8HMG.

7 Mc. C.W.
201Z: C0CXM, 0602Z: EA8CQ 0630Z, CNDXJ 0745Z, LZ, VQ2, UL7, UA9, PY2BIS, 4X4HA, ZS, JE, ZR2: VR2DA, W/K*, JA*.
1AMM: ZELIY*, ZS6AY*, on 8 watts, ZR-6F, 0745Z, M3V, 0745Z.

BERS19S: CR1CD, TJT, CT1QN, DJ5UO, ZR-4FO, 8CU, ET3EC (QTH?), F2CO, G8AG, GC2F3Q, GWSLL, H8P7Z, HASDA, H1MG, LZ-2KSN, MBTAF, OESHS, OHANS, OKZLS, C27BQ, PAURJ, SM3CC, SP8KZ, UA8UJ, 9KCA, USTAF, UC2OM, UDRAM, UNIAN, UO-51T, UQ2CQ, UR2BU, VQ3HD, 4DT, 4GQ, 4HT, 4J2, 4J3, 4J4, 4J5, 4J6, 4J7, 4J8, 4J9, 4JA, 4JB, 4JC, 4JD, 4JE, 4JF, 4JG, 4JH, 4JI, 4JJ, 4JK, 4JL, 4JM, 4JN, 4JO, 4JP, 4JQ, 4JR, 4JS, 4JT, 4JU, 4JV, 4JW, 4JX, 4JY, 4JZ, 4KA, 4KB, 4KC, 4KD, 4KE, 4KF, 4KG, 4KH, 4KI, 4KJ, 4KK, 4KL, 4KM, 4KN, 4KO, 4KP, 4KQ, 4KR, 4KS, 4KT, 4KU, 4KV, 4KW, 4KX, 4KY, 4KZ, 4LA, 4LB, 4LC, 4LD, 4LE, 4LF, 4LG, 4LH, 4LI, 4LJ, 4LK, 4LM, 4LN, 4LO, 4LP, 4LQ, 4LR, 4LS, 4LT, 4LU, 4LV, 4LW, 4LX, 4LY, 4LZ, 4MA, 4MB, 4MC, 4MD, 4ME, 4MF, 4MG, 4MH, 4MI, 4MJ, 4MK, 4ML, 4MN, 4MO, 4MP, 4MQ, 4MR, 4MS, 4MT, 4MU, 4MV, 4MW, 4MX, 4MY, 4MZ, 4NA, 4NB, 4NC, 4ND, 4NE, 4NF, 4NG, 4NH, 4NI, 4NJ, 4NK, 4NL, 4NM, 4NN, 4NO, 4NP, 4NQ, 4NR, 4NS, 4NT, 4NU, 4NV, 4NW, 4NX, 4NY, 4NZ, 4OA, 4OB, 4OC, 4OD, 4OE, 4OF, 4OG, 4OH, 4OI, 4OJ, 4OK, 4OL, 4OM, 4ON, 4OO, 4OP, 4OQ, 4OR, 4OS, 4OT, 4OU, 4OV, 4OW, 4OX, 4OY, 4OZ, 4PA, 4PB, 4PC, 4PD, 4PE, 4PF, 4PG, 4PH, 4PI, 4PJ, 4PK, 4PL, 4PM, 4PN, 4PO, 4PP, 4PQ, 4PR, 4PS, 4PT, 4PU, 4PV, 4PW, 4PX, 4PY, 4PZ, 4QA, 4QB, 4QC, 4QD, 4QE, 4QF, 4QG, 4QH, 4QI, 4QJ, 4QK, 4QL, 4QM, 4QN, 4QO, 4QP, 4QQ, 4QR, 4QS, 4QT, 4QU, 4QV, 4QW, 4QX, 4QY, 4QZ, 4RA, 4RB, 4RC, 4RD, 4RE, 4RF, 4RG, 4RH, 4RI, 4RJ, 4RK, 4RL, 4RM, 4RN, 4RO, 4RP, 4RQ, 4RR, 4RS, 4RT, 4RU, 4RV, 4RW, 4RX, 4RY, 4RZ, 4SA, 4SB, 4SC, 4SD, 4SE, 4SF, 4SG, 4SH, 4SI, 4SJ, 4SK, 4SL, 4SM, 4SN, 4SO, 4SP, 4SQ, 4SR, 4SS, 4ST, 4SU, 4SV, 4SW, 4SX, 4SY, 4SZ, 4TA, 4TB, 4TC, 4TD, 4TE, 4TF, 4TG, 4TH, 4TI, 4TJ, 4TK, 4TL, 4TM, 4TN, 4TO, 4TP, 4TQ, 4TR, 4TS, 4TT, 4TU, 4TV, 4TW, 4TX, 4TY, 4TZ, 4UA, 4UB, 4UC, 4UD, 4UE, 4UF, 4UG, 4UH, 4UI, 4UJ, 4UK, 4UL, 4UM, 4UN, 4UO, 4UP, 4UQ, 4UR, 4US, 4UT, 4UU, 4UV, 4UW, 4UX, 4UY, 4UZ, 4VA, 4VB, 4VC, 4VD, 4VE, 4VF, 4VG, 4VH, 4VI, 4VJ, 4VK, 4VL, 4VM, 4VN, 4VO, 4VP, 4VQ, 4VR, 4VS, 4VT, 4VU, 4VV, 4VW, 4VX, 4VY, 4VZ, 4WA, 4WB, 4WC, 4WD, 4WE, 4WF, 4WG, 4WH, 4WI, 4WJ, 4WK, 4WL, 4WM, 4WN, 4WO, 4WP, 4WQ, 4WR, 4WS, 4WT, 4WU, 4WV, 4WW, 4WX, 4WY, 4WZ, 4XA, 4XB, 4XC, 4XD, 4XE, 4XF, 4XG, 4XH, 4XI, 4XJ, 4XK, 4XL, 4XM, 4XN, 4XO, 4XP, 4XQ, 4XR, 4XS, 4XT, 4XU, 4XV, 4XW, 4XX, 4XY, 4XZ, 4YA, 4YB, 4YC, 4YD, 4YE, 4YF, 4YG, 4YH, 4YI, 4YJ, 4YK, 4YL, 4YM, 4YN, 4YO, 4YP, 4YQ, 4YR, 4YS, 4YT, 4YU, 4YV, 4YW, 4YX, 4YY, 4YZ, 4ZA, 4ZB, 4ZC, 4ZD, 4ZE, 4ZF, 4ZG, 4ZH, 4ZI, 4ZJ, 4ZK, 4ZL, 4ZM, 4ZN, 4ZO, 4ZP, 4ZQ, 4ZR, 4ZS, 4ZT, 4ZU, 4ZV, 4ZW, 4ZX, 4ZY, 4ZZ, 4AA, 4AB, 4AC, 4AD, 4AE, 4AF, 4AG, 4AH, 4AI, 4AJ, 4AK, 4AL, 4AM, 4AN, 4AO, 4AP, 4AQ, 4AR, 4AS, 4AT, 4AU, 4AV, 4AW, 4AX, 4AY, 4AZ, 4BA, 4BB, 4BC, 4BD, 4BE, 4BF, 4BG, 4BH, 4BI, 4BJ, 4BK, 4BL, 4BM, 4BN, 4BO, 4BP, 4BQ, 4BR, 4BS, 4BT, 4BU, 4BV, 4BW, 4BX, 4BY, 4BZ, 4CA, 4CB, 4CC, 4CD, 4CE, 4CF, 4CG, 4CH, 4CI, 4CJ, 4CK, 4CL, 4CM, 4CN, 4CO, 4CP, 4CQ, 4CR, 4CS, 4CT, 4CU, 4CV, 4CW, 4CX, 4CY, 4CZ, 4DA, 4DB, 4DC, 4DD, 4DE, 4DF, 4DG, 4DH, 4DI, 4DJ, 4DK, 4DL, 4DM, 4DN, 4DO, 4DP, 4DQ, 4DR, 4DS, 4DT, 4DU, 4DV, 4DW, 4DX, 4DY, 4DZ, 4EA, 4EB, 4EC, 4ED, 4EE, 4EF, 4EG, 4EH, 4EI, 4EJ, 4EK, 4EL, 4EM, 4EN, 4EO, 4EP, 4EQ, 4ER, 4ES, 4ET, 4EU, 4EV, 4EW, 4EX, 4EY, 4EZ, 4FA, 4FB, 4FC, 4FD, 4FE, 4FF, 4FG, 4FH, 4FI, 4FJ, 4FK, 4FL, 4FM, 4FN, 4FO, 4FP, 4FQ, 4FR, 4FS, 4FT, 4FU, 4FV, 4FW, 4FX, 4FY, 4FZ, 4GA, 4GB, 4GC, 4GD, 4GE, 4GF, 4GG, 4GH, 4GI, 4GJ, 4GK, 4GL, 4GM, 4GN, 4GO, 4GP, 4GQ, 4GR, 4GS, 4GT, 4GU, 4GV, 4GW, 4GX, 4GY, 4GZ, 4HA, 4HB, 4HC, 4HD, 4HE, 4HF, 4HG, 4HH, 4HI, 4HJ, 4HK, 4HL, 4HM, 4HN, 4HO, 4HP, 4HQ, 4HR, 4HS, 4HT, 4HU, 4HV, 4HW, 4HX, 4HY, 4HZ, 4IA, 4IB, 4IC, 4ID, 4IE, 4IF, 4IG, 4IH, 4II, 4IJ, 4IK, 4IL, 4IM, 4IN, 4IO, 4IP, 4IQ, 4IR, 4IS, 4IT, 4IU, 4IV, 4IW, 4IX, 4IY, 4IZ, 4JA, 4JB, 4JC, 4JD, 4JE, 4JF, 4JG, 4JH, 4JI, 4JJ, 4JK, 4JL, 4JM, 4JN, 4JO, 4JP, 4JQ, 4JR, 4JS, 4JT, 4JU, 4JV, 4JW, 4JX, 4JY, 4JZ, 4KA, 4KB, 4KC, 4KD, 4KE, 4KF, 4KG, 4KH, 4KI, 4KJ, 4KK, 4KL, 4KM, 4KN, 4KO, 4KP, 4KQ, 4KR, 4KS, 4KT, 4KU, 4KV, 4KW, 4KX, 4KY, 4KZ, 4LA, 4LB, 4LC, 4LD, 4LE, 4LF, 4LG, 4LH, 4LI, 4LJ, 4LK, 4LM, 4LN, 4LO, 4LP, 4LQ, 4LR, 4LS, 4LT, 4LU, 4LV, 4LW, 4LX, 4LY, 4LZ, 4MA, 4MB, 4MC, 4MD, 4ME, 4MF, 4MG, 4MH, 4MI, 4MJ, 4MK, 4ML, 4MN, 4MO, 4MP, 4MQ, 4MR, 4MS, 4MT, 4MU, 4MV, 4MW, 4MX, 4MY, 4MZ, 4NA, 4NB, 4NC, 4ND, 4NE, 4NF, 4NG, 4NH, 4NI, 4NJ, 4NK, 4NL, 4NM, 4NN, 4NO, 4NP, 4NQ, 4NR, 4NS, 4NT, 4NU, 4NV, 4NW, 4NX, 4NY, 4NZ, 4OA, 4OB, 4OC, 4OD, 4OE, 4OF, 4OG, 4OH, 4OI, 4OJ, 4OK, 4OL, 4OM, 4ON, 4OO, 4OP, 4OQ, 4OR, 4OS, 4OT, 4OU, 4OV, 4OW, 4OX, 4OY, 4OZ, 4PA, 4PB, 4PC, 4PD, 4PE, 4PF, 4PG, 4PH, 4PI, 4PJ, 4PK, 4PL, 4PM, 4PN, 4PO, 4PP, 4PQ, 4PR, 4PS, 4PT, 4PU, 4PV, 4PW, 4PX, 4PY, 4PZ, 4QA, 4QB, 4QC, 4QD, 4QE, 4QF, 4QG, 4QH, 4QI, 4QJ, 4QK, 4QL, 4QM, 4QN, 4QO, 4QP, 4QQ, 4QR, 4QS, 4QT, 4QU, 4QV, 4QW, 4QX, 4QY, 4QZ, 4RA, 4RB, 4RC, 4RD, 4RE, 4RF, 4RG, 4RH, 4RI, 4RJ, 4RK, 4RL, 4RM, 4RN, 4RO, 4RP, 4RQ, 4RR, 4RS, 4RT, 4RU, 4RV, 4RW, 4RX, 4RY, 4RZ, 4SA, 4SB, 4SC, 4SD, 4SE, 4SF, 4SG, 4SH, 4SI, 4SJ, 4SK, 4SL, 4SM, 4SN, 4SO, 4SP, 4SQ, 4SR, 4SS, 4ST, 4SU, 4SV, 4SW, 4SX, 4SY, 4SZ, 4TA, 4TB, 4TC, 4TD, 4TE, 4TF, 4TG, 4TH, 4TI, 4TJ, 4TK, 4TL, 4TM, 4TN, 4TO, 4TP, 4TQ, 4TR, 4TS, 4TT, 4TU, 4TV, 4TW, 4TX, 4TY, 4TZ, 4UA, 4UB, 4UC, 4UD, 4UE, 4UF, 4UG, 4UH, 4UI, 4UJ, 4UK, 4UL, 4UM, 4UN, 4UO, 4UP, 4UQ, 4UR, 4US, 4UT, 4UU, 4UV, 4UW, 4UX, 4UY, 4UZ, 4VA, 4VB, 4VC, 4VD, 4VE, 4VF, 4VG, 4VH, 4VI, 4VJ, 4VK, 4VL, 4VM, 4VN, 4VO, 4VP, 4VQ, 4VR, 4VS, 4VT, 4VU, 4VV, 4VW, 4VX, 4VY, 4VZ, 4WA, 4WB, 4WC, 4WD, 4WE, 4WF, 4WG, 4WH, 4WI, 4WJ, 4WK, 4WL, 4WM, 4WN, 4WO, 4WP, 4WQ, 4WR, 4WS, 4WT, 4WU, 4WV, 4WW, 4WX, 4WY, 4WZ, 4XA, 4XB, 4XC, 4XD, 4XE, 4XF, 4XG, 4XH, 4XI, 4XJ, 4XK, 4XL, 4XM, 4XN, 4XO, 4XP, 4XQ, 4XR, 4XS, 4XT, 4XU, 4XV, 4XW, 4XY, 4XZ, 4YA, 4YB, 4YC, 4YD, 4YE, 4YF, 4YG, 4YH, 4YI, 4YJ, 4YK, 4YL, 4YM, 4YN, 4YO, 4YP, 4YQ, 4YR, 4YS, 4YT, 4YU, 4YV, 4YW, 4YX, 4YY, 4YZ, 4ZA, 4ZB, 4ZC, 4ZD, 4ZE, 4ZF, 4ZG, 4ZH, 4ZI, 4ZJ, 4ZK, 4ZL, 4ZM, 4ZN, 4ZO, 4ZP, 4ZQ, 4ZR, 4ZS, 4ZT, 4ZU, 4ZV, 4ZW, 4ZX, 4ZY, 4ZZ, 4AA, 4AB, 4AC, 4AD, 4AE, 4AF, 4AG, 4AH, 4AI, 4AJ, 4AK, 4AL, 4AM, 4AN, 4AO, 4AP, 4AQ, 4AR, 4AS, 4AT, 4AU, 4AV, 4AW, 4AX, 4AY, 4AZ, 4BA, 4BB, 4BC, 4BD, 4BE, 4BF, 4BG, 4BH, 4BI, 4BJ, 4BK, 4BL, 4BM, 4BN, 4BO, 4BP, 4BQ, 4BR, 4BS, 4BT, 4BU, 4BV, 4BW, 4BX, 4BY, 4BZ, 4CA, 4CB, 4CC, 4CD, 4CE, 4CF, 4CG, 4CH, 4CI, 4CJ, 4CK, 4CL, 4CM, 4CN, 4CO, 4CP, 4CQ, 4CR, 4CS, 4CT, 4CU, 4CV, 4CW, 4CX, 4CY, 4CZ, 4DA, 4DB, 4DC, 4DD, 4DE, 4DF, 4DG, 4DH, 4DI, 4DJ, 4DK, 4DL, 4DM, 4DN, 4DO, 4DP, 4DQ, 4DR, 4DS, 4DT, 4DU, 4DV, 4DW, 4DX, 4DY, 4DZ, 4EA, 4EB, 4EC, 4ED, 4EE, 4EF, 4EG, 4EH, 4EI, 4EJ, 4EK, 4EL, 4EM, 4EN, 4EO, 4EP, 4EQ, 4ER, 4ES, 4ET, 4EU, 4EV, 4EW, 4EX, 4EY, 4EZ, 4FA, 4FB, 4FC, 4FD, 4FE, 4FF, 4FG, 4FH, 4FI, 4FJ, 4FK, 4FL, 4FM, 4FN, 4FO, 4FP, 4FQ, 4FR, 4FS, 4FT, 4FU, 4FV, 4FW, 4FX, 4FY, 4FZ, 4GA, 4GB, 4GC, 4GD, 4GE, 4GF, 4GG, 4GH, 4GI, 4GJ, 4GK, 4GL, 4GM, 4GN, 4GO, 4GP, 4GQ, 4GR, 4GS, 4GT, 4GU, 4GV, 4GW, 4GX, 4GY, 4GZ, 4HA, 4HB, 4HC, 4HD, 4HE, 4HF, 4HG, 4HH, 4HI, 4HJ, 4HK, 4HL, 4HM, 4HN, 4HO, 4HP, 4HQ, 4HR, 4HS, 4HT, 4HU, 4HV, 4HW, 4HX, 4HY, 4HZ, 4IA, 4IB, 4IC, 4ID, 4IE, 4IF, 4IG, 4IH, 4II, 4IJ, 4IK, 4IL, 4IM, 4IN, 4IO, 4IP, 4IQ, 4IR, 4IS, 4IT, 4IU, 4IV, 4IW, 4IX, 4IY, 4IZ, 4JA, 4JB, 4JC, 4JD, 4JE, 4JF, 4JG, 4JH, 4JI, 4JJ, 4JK, 4JL, 4JM, 4JN, 4JO, 4JP, 4JQ, 4JR, 4JS, 4JT, 4JU, 4JV, 4JW, 4JX, 4JY, 4JZ, 4KA, 4KB, 4KC, 4KD, 4KE, 4KF, 4KG, 4KH, 4KI, 4KJ, 4KK, 4KL, 4KM, 4KN, 4KO, 4KP, 4KQ, 4KR, 4KS, 4KT, 4KU, 4KV, 4KW, 4KX, 4KY, 4KZ, 4LA, 4LB, 4LC, 4LD, 4LE, 4LF, 4LG, 4LH, 4LI, 4LJ, 4LK, 4LM, 4LN, 4LO, 4LP, 4LQ, 4LR, 4LS, 4LT, 4LU, 4LV, 4LW, 4LX, 4LY, 4LZ, 4MA, 4MB, 4MC, 4MD, 4ME, 4MF, 4MG, 4MH, 4MI, 4MJ, 4MK, 4ML, 4MN, 4MO, 4MP, 4MQ, 4MR, 4MS, 4MT, 4MU, 4MV, 4MW, 4MX, 4MY, 4MZ, 4NA, 4NB, 4NC, 4ND, 4NE, 4NF, 4NG, 4NH, 4NI, 4NJ, 4NK, 4NL, 4NM, 4NN, 4NO, 4NP, 4NQ, 4NR, 4NS, 4NT, 4NU, 4NV, 4NW, 4NX, 4NY, 4NZ, 4OA, 4OB, 4OC, 4OD, 4OE, 4OF, 4OG, 4OH, 4OI, 4OJ, 4OK, 4OL, 4OM, 4ON, 4OO, 4OP, 4OQ, 4OR, 4OS, 4OT, 4OU, 4OV, 4OW, 4OX, 4OY, 4OZ, 4PA, 4PB, 4PC, 4PD, 4PE, 4PF, 4PG, 4PH, 4PI, 4PJ, 4PK, 4PL, 4PM, 4PN, 4PO, 4PP, 4PQ, 4PR, 4PS, 4PT, 4PU, 4PV, 4PW, 4PX, 4PY, 4PZ, 4QA, 4QB, 4QC, 4QD, 4QE, 4QF, 4QG, 4QH, 4QI, 4QJ, 4QK, 4QL, 4QM, 4QN, 4QO, 4QP, 4QQ, 4QR, 4QS, 4QT, 4QU, 4QV, 4QW, 4QX, 4QY, 4QZ, 4RA, 4RB, 4RC, 4RD, 4RE, 4RF, 4RG, 4RH, 4RI, 4RJ, 4RK, 4RL, 4RM, 4RN, 4RO, 4RP, 4RQ, 4RR, 4RS, 4RT, 4RU, 4RV, 4RW, 4RX, 4RY, 4RZ, 4SA, 4SB, 4SC, 4SD, 4SE, 4SF, 4SG, 4SH, 4SI, 4SJ, 4SK, 4SL, 4SM, 4SN, 4SO, 4SP, 4SQ, 4SR, 4SS, 4ST, 4SU, 4SV, 4SW, 4SX, 4SY, 4SZ, 4TA, 4TB, 4TC, 4TD, 4TE, 4TF, 4TG, 4TH, 4TI, 4TJ, 4TK, 4TL, 4TM, 4TN, 4TO, 4TP, 4TQ, 4TR, 4TS, 4TT, 4TU, 4TV, 4TW, 4TX, 4TY, 4TZ, 4UA, 4UB, 4UC, 4UD, 4UE, 4UF, 4UG, 4UH, 4UI, 4UJ, 4UK, 4UL, 4UM, 4UN, 4UO, 4UP, 4UQ, 4UR, 4US, 4UT, 4UU, 4UV, 4UW, 4UX, 4UY, 4UZ, 4VA, 4VB, 4VC, 4VD, 4VE, 4VF, 4VG, 4VH, 4VI, 4VJ, 4VK, 4VL, 4VM, 4VN, 4VO, 4VP, 4VQ, 4VR, 4VS, 4VT, 4VU, 4VV, 4VW, 4VX, 4VY, 4VZ, 4WA, 4WB, 4WC, 4WD, 4WE, 4WF, 4WG, 4WH, 4WI, 4WJ, 4WK, 4WL, 4WM, 4WN, 4WO, 4WP, 4WQ, 4WR, 4WS, 4WT, 4WU, 4WV, 4WW, 4WX, 4WY, 4WZ, 4XA, 4XB, 4XC, 4XD, 4XE, 4XF, 4XG, 4XH, 4XI, 4XJ, 4XK, 4XL, 4XM, 4XN, 4XO, 4XP, 4XQ, 4XR, 4XS, 4XT, 4XU, 4XV, 4XW, 4XY, 4XZ, 4YA, 4YB, 4YC, 4YD, 4YE, 4YF, 4YG, 4YH, 4YI, 4YJ, 4YK, 4YL, 4YM, 4YN, 4YO, 4YP, 4YQ, 4YR, 4YS, 4YT, 4YU, 4YV, 4YW, 4YX, 4YY, 4YZ, 4ZA, 4ZB, 4ZC, 4ZD, 4ZE, 4ZF, 4ZG, 4ZH, 4ZI, 4ZJ, 4ZK, 4ZL, 4ZM, 4ZN, 4ZO, 4ZP, 4ZQ, 4ZR, 4ZS, 4ZT, 4ZU, 4ZV, 4ZW, 4ZX, 4ZY, 4ZZ, 4AA, 4AB, 4AC, 4AD, 4AE, 4AF, 4AG, 4AH, 4AI, 4AJ, 4AK, 4AL, 4AM, 4AN, 4AO, 4AP, 4AQ, 4AR, 4AS, 4AT, 4AU, 4AV, 4AW, 4AX, 4AY, 4AZ, 4BA, 4BB, 4BC, 4BD, 4BE, 4BF, 4BG, 4BH, 4BI, 4BJ, 4BK, 4BL, 4BM, 4BN, 4BO, 4BP, 4BQ, 4BR, 4BS, 4BT, 4BU, 4BV, 4BW, 4BX, 4BY, 4BZ, 4CA, 4CB, 4CC, 4CD, 4CE, 4CF, 4CG, 4CH, 4CI, 4CJ, 4CK, 4CL, 4CM, 4CN, 4CO, 4CP, 4CQ, 4CR, 4CS, 4CT, 4CU, 4CV, 4CW, 4CX, 4CY, 4CZ, 4DA, 4DB, 4DC, 4DD, 4DE, 4DF, 4DG, 4DH, 4DI, 4DJ, 4DK, 4DL, 4DM, 4DN, 4DO, 4DP, 4DQ, 4DR, 4DS, 4DT, 4DU, 4DV, 4DW, 4DX, 4DY, 4DZ, 4EA, 4EB, 4EC, 4ED, 4EE, 4EF, 4EG, 4EH, 4EI, 4EJ, 4EK, 4EL, 4EM, 4EN, 4EO, 4EP, 4EQ, 4ER, 4ES, 4ET, 4EU, 4EV, 4EW, 4EX, 4EY, 4EZ, 4FA, 4FB, 4FC, 4FD, 4FE, 4FF, 4FG, 4FH, 4FI, 4FJ, 4FK, 4FL, 4FM, 4FN, 4FO, 4FP, 4FQ, 4FR, 4FS, 4FT, 4FU, 4FV, 4FW, 4FX, 4FY, 4FZ, 4GA, 4GB, 4GC, 4GD, 4GE, 4GF, 4GG, 4GH, 4GI, 4GJ, 4GK, 4GL, 4GM, 4GN, 4GO, 4GP, 4GQ, 4GR, 4GS, 4GT, 4GU, 4GV, 4GW, 4GX, 4GY, 4GZ, 4HA, 4HB, 4HC, 4HD, 4HE, 4HF, 4HG, 4HH, 4HI, 4HJ, 4HK, 4HL, 4HM, 4HN, 4HO, 4HP, 4HQ, 4HR, 4HS, 4HT, 4HU, 4HV, 4HW, 4HX, 4HY, 4HZ, 4IA, 4IB, 4IC, 4ID, 4IE, 4IF, 4IG, 4IH, 4II, 4IJ, 4IK, 4IL, 4IM, 4IN, 4IO, 4IP, 4IQ, 4IR, 4IS, 4IT, 4IU, 4IV, 4IW, 4IX, 4IY, 4IZ, 4JA, 4JB, 4JC, 4JD, 4JE, 4JF, 4JG, 4JH, 4JI, 4JJ, 4JK, 4JL, 4JM, 4JN, 4JO, 4JP, 4JQ, 4JR, 4JS, 4JT, 4JU, 4JV, 4JW, 4JX, 4JY, 4JZ, 4KA, 4KB, 4KC, 4KD, 4KE, 4KF, 4KG, 4KH, 4KI, 4KJ, 4KK, 4KL, 4KM, 4KN, 4KO, 4KP, 4KQ, 4KR, 4KS, 4KT, 4KU, 4KV, 4KW, 4KX, 4KY, 4KZ, 4LA, 4LB, 4LC, 4LD, 4LE, 4LF, 4LG, 4LH, 4LI, 4LJ, 4LK, 4LM, 4LN, 4LO, 4LP, 4LQ, 4LR, 4LS, 4LT, 4LU, 4LV, 4LW, 4LX, 4LY, 4LZ, 4MA, 4MB, 4MC, 4MD, 4ME, 4MF, 4MG, 4MH, 4MI, 4MJ, 4MK, 4ML, 4MN, 4MO, 4MP, 4MQ, 4MR, 4MS, 4MT, 4MU, 4MV, 4MW, 4MX, 4MY, 4MZ, 4NA, 4NB, 4NC, 4ND, 4NE, 4NF, 4NG, 4NH, 4NI, 4NJ, 4NK, 4NL, 4NM, 4NN, 4NO, 4NP, 4NQ, 4NR, 4NS, 4NT, 4NU, 4NV, 4NW, 4NX, 4NY, 4NZ, 4OA, 4OB, 4OC, 4OD, 4OE, 4OF, 4OG, 4OH, 4OI, 4OJ, 4OK, 4OL, 4OM, 4ON, 4OO, 4OP, 4OQ, 4OR, 4OS, 4OT, 4OU, 4OV, 4OW, 4OX, 4OY, 4OZ, 4PA, 4PB, 4PC, 4PD, 4PE, 4PF, 4PG, 4PH, 4PI, 4PJ, 4PK, 4PL, 4PM, 4PN, 4PO, 4PP, 4PQ, 4PR, 4PS, 4PT, 4PU, 4PV, 4PW, 4PX, 4PY, 4PZ, 4QA, 4QB, 4QC, 4QD, 4QE, 4QF, 4QG, 4QH, 4QI, 4QJ, 4QK, 4QL, 4QM, 4QN, 4QO, 4QP, 4QQ, 4QR, 4

4 F

Frank P. O'Dwyer, VK3OF
199 Thomas Street,
Hampton, Vic.

50 MEGACYCLES

The Ross Hull Contest certainly got off to a good start. The first Sunday in December provided an almost all-day opening for Es with JA thrown in for VK3-3-4-5-7. It was strange to hear the VK3 gang complain about the long JA skip which was shooting overhead and landing SG sigs in VK7. This was around 1130, then VK3 had them from 1300 to 1630 with quite a few contacts made. Bob 4NG missed out, although he could hear the JA commercials around 42 megs., there was no sign of JA sigs on 50 megs.

Incomplete reports indicate that VK2 QSO'd VK3, 4, 6; VK3 QSO'd VK2 4, with VK5 heard on back scatter; VK4 made the grade to VK3, 3, 6, 7. Es started about 1600 and the Rockhampton stations went out finally about 2130. Every Ham with 50 Mc. gear in VK3 appeared to be on the band and the QRM was terrific, not helped at all by the v.f.o. enthusiasts. One pleasing feature was the way some v.f.o. operators spread out up to 50.6 and still got contacts. ZL came into the picture with a contact from VK2.

While all this was going on, reports of t.v.l. QRM between Interstate channels were floating around, confirmed when ABV2 broke their programme to state that a Rockhampton viewer had reported receiving an excellent picture between 1800 and 2100. We want more of this, the more the QRM on Channel 2, the better the retention chances of Channel 1 are.

Before leaving this opening, a check by Jack SZDG listed 47 VK3s active and he believes that he missed others in the country area.

November all around was a relatively quiet month, though the VK4 to JA, claimed by excellent openings from VK4 to JA, claimed by me to be superior to the openings this time last year. A number of Es openings took place but they were all sharp and sweet speaking to me. The best I had was listening too long. It is believed that one VK4/Darwin contact has been made, so the hopes for W.A.S. for many of the gang are brighter than they have been for a long time. One station well worth watching is 6XW, who has been making good contacts at every night with auto keying from 1900-1920 and 1935-2000 E.A.S.T.

VICTORIA

Nov. '59. This is certainly different from Nov. '58. It appeared early in the month that something was in the air. The first event was an event. However, towards the end it started to look promising. Nov. 1 ABQ2 was reported from the western district, it appeared to be a good morning. Nov. 2 ABQ2 was the 22nd the VK4s were in Melb. for a short period around 1130. On Nov. 25 a Melb. suburban taxi service operating VHF 144.000 was the morning from a station which appeared to be in Pakistan. Will refer to this later. On Nov. 26 the station was suddenly surprised to see signals other than their own on the studio monitors. They identified ABQ2 test pattern and also heard the sound transmission. Nov. 27 the station was surprised to have been seen or heard in VK4? At the same time G2AX was working into Melb. So we didn't do too badly after all. Nov. 28 the station was surprised to see signals other than their own on the studio monitors. They identified ABQ2 test pattern and also heard the sound transmission. Nov. 29 the station was surprised to have been seen or heard in VK4? At the same time G2AX was working into Melb. So we didn't do too badly after all. Nov. 30 the station was surprised to see signals other than their own on the studio monitors. They identified ABQ2 test pattern and also heard the sound transmission. Nov. 31 the station was surprised to have been seen or heard in VK4? At the same time G2AX was working into Melb. So we didn't do too badly after all.

Re the Footscray taxi service. It was reported that this channel, 70.94 Mc., was interfered with by a station reputedly in Pakistan. As certain aspects reported in the local press appear to be inaccurate, it is being personally investigated by interested persons and the results will be made available later. If the report is confirmed, it will go into the records of propagation phenomena peculiar to v.h.f. and quite a long hop by F2 reflection with the m.u.f. around 70-80 Mc.—3ZGP.

QUEENSLAND

Nov. 1 JA in 1937 to 2010 hrs. at S3 to 7, districts 1, 3, 4. Nov. 3 a really good opening for JA to S120, S121, S122, S123, S124, S125, S126, S127, S128, S129, S130, S131, S132, S133, S134, S135, S136, S137, S138, S139, S140, S141, S142, S143, S144, S145, S146, S147, S148, S149, S150, S151, S152, S153, S154, S155, S156, S157, S158, S159, S160, S161, S162, S163, S164, S165, S166, S167, S168, S169, S170, S171, S172, S173, S174, S175, S176, S177, S178, S179, S180, S181, S182, S183, S184, S185, S186, S187, S188, S189, S190, S191, S192, S193, S194, S195, S196, S197, S198, S199, S200, S201, S202, S203, S204, S205, S206, S207, S208, S209, S210, S211, S212, S213, S214, S215, S216, S217, S218, S219, S220, S221, S222, S223, S224, S225, S226, S227, S228, S229, S230, S231, S232, S233, S234, S235, S236, S237, S238, S239, S240, S241, S242, S243, S244, S245, S246, S247, S248, S249, S250, S251, S252, S253, S254, S255, S256, S257, S258, S259, S260, S261, S262, S263, S264, S265, S266, S267, S268, S269, S270, S271, S272, S273, S274, S275, S276, S277, S278, S279, S280, S281, S282, S283, S284, S285, S286, S287, S288, S289, S290, S291, S292, S293, S294, S295, S296, S297, S298, S299, S300, S301, S302, S303, S304, S305, S306, S307, S308, S309, S310, S311, S312, S313, S314, S315, S316, S317, S318, S319, S320, S321, S322, S323, S324, S325, S326, S327, S328, S329, S330, S331, S332, S333, S334, S335, S336, S337, S338, S339, S340, S341, S342, S343, S344, S345, S346, S347, S348, S349, S350, S351, S352, S353, S354, S355, S356, S357, S358, S359, S360, S361, S362, S363, S364, S365, S366, S367, S368, S369, S370, S371, S372, S373, S374, S375, S376, S377, S378, S379, S380, S381, S382, S383, S384, S385, S386, S387, S388, S389, S390, S391, S392, S393, S394, S395, S396, S397, S398, S399, S400, S401, S402, S403, S404, S405, S406, S407, S408, S409, S410, S411, S412, S413, S414, S415, S416, S417, S418, S419, S420, S421, S422, S423, S424, S425, S426, S427, S428, S429, S430, S431, S432, S433, S434, S435, S436, S437, S438, S439, S440, S441, S442, S443, S444, S445, S446, S447, S448, S449, S450, S451, S452, S453, S454, S455, S456, S457, S458, S459, S460, S461, S462, S463, S464, S465, S466, S467, S468, S469, S470, S471, S472, S473, S474, S475, S476, S477, S478, S479, S480, S481, S482, S483, S484, S485, S486, S487, S488, S489, S490, S491, S492, S493, S494, S495, S496, S497, S498, S499, S500, S501, S502, S503, S504, S505, S506, S507, S508, S509, S510, S511, S512, S513, S514, S515, S516, S517, S518, S519, S520, S521, S522, S523, S524, S525, S526, S527, S528, S529, S530, S531, S532, S533, S534, S535, S536, S537, S538, S539, S540, S541, S542, S543, S544, S545, S546, S547, S548, S549, S550, S551, S552, S553, S554, S555, S556, S557, S558, S559, S560, S561, S562, S563, S564, S565, S566, S567, S568, S569, S570, S571, S572, S573, S574, S575, S576, S577, S578, S579, S580, S581, S582, S583, S584, S585, S586, S587, S588, S589, S590, S591, S592, S593, S594, S595, S596, S597, S598, S599, S600, S601, S602, S603, S604, S605, S606, S607, S608, S609, S610, S611, S612, S613, S614, S615, S616, S617, S618, S619, S620, S621, S622, S623, S624, S625, S626, S627, S628, S629, S630, S631, S632, S633, S634, S635, S636, S637, S638, S639, S640, S641, S642, S643, S644, S645, S646, S647, S648, S649, S650, S651, S652, S653, S654, S655, S656, S657, S658, S659, S660, S661, S662, S663, S664, S665, S666, S667, S668, S669, S670, S671, S672, S673, S674, S675, S676, S677, S678, S679, S680, S681, S682, S683, S684, S685, S686, S687, S688, S689, S690, S691, S692, S693, S694, S695, S696, S697, S698, S699, S700, S701, S702, S703, S704, S705, S706, S707, S708, S709, S710, S711, S712, S713, S714, S715, S716, S717, S718, S719, S720, S721, S722, S723, S724, S725, S726, S727, S728, S729, S730, S731, S732, S733, S734, S735, S736, S737, S738, S739, S740, S741, S742, S743, S744, S745, S746, S747, S748, S749, S750, S751, S752, S753, S754, S755, S756, S757, S758, S759, S760, S761, S762, S763, S764, S765, S766, S767, S768, S769, S770, S771, S772, S773, S774, S775, S776, S777, S778, S779, S780, S781, S782, S783, S784, S785, S786, S787, S788, S789, S790, S791, S792, S793, S794, S795, S796, S797, S798, S799, S800, S801, S802, S803, S804, S805, S806, S807, S808, S809, S810, S811, S812, S813, S814, S815, S816, S817, S818, S819, S820, S821, S822, S823, S824, S825, S826, S827, S828, S829, S830, S831, S832, S833, S834, S835, S836, S837, S838, S839, S840, S841, S842, S843, S844, S845, S846, S847, S848, S849, S850, S851, S852, S853, S854, S855, S856, S857, S858, S859, S860, S861, S862, S863, S864, S865, S866, S867, S868, S869, S870, S871, S872, S873, S874, S875, S876, S877, S878, S879, S880, S881, S882, S883, S884, S885, S886, S887, S888, S889, S890, S891, S892, S893, S894, S895, S896, S897, S898, S899, S900, S901, S902, S903, S904, S905, S906, S907, S908, S909, S910, S911, S912, S913, S914, S915, S916, S917, S918, S919, S920, S921, S922, S923, S924, S925, S926, S927, S928, S9

New calls on 5 to whom I extend a welcome. Geo 4ZZZ and Bill 4WD. Neddy 4ZBJ was in Brisbane for week-end of 7th, believe he converted his YL to XYL. Congrats Neddy, and all the very best to both of you for the future. Had words with Geo 3ZCG for about 20 minutes, no QSB, S9 90Q. They tell me I'm an expert on transistor modulators and Geo. have to contact you again and tally records of wisdom. 4ZBL is back on the air after exams., 4HD has a new converter for 50 Mc. and 4ZAA is going to v.f.o. so watch the 50.5 up the band.—4ZBI.

SOUTH AUSTRALIA

50 Mc. DX has been practically non-existent except for the last week when our good friends in VK4 came through on Sunday morning, the 22nd. Almost immediately after Wally 6WG came through for a short contact with Barry 5ZBZ. Sat. night, 26th, saw an opening to VK7 and Sunday morning, 29th, the VK4s were worked again, those contacted being Lance 4ZAZ, Doug 4PG and old Bob 4NG.

Barry SZBZ is on holidays, seems to coincide with the Ross Hull Contest. Barry wants to jump away to a good score, he was heard knocking over the DX on the 30th. Al SZCR has mobile gear coming up in his new Australia's own, a 4/15 in the final running 20w. Al should be visiting VK3 at Christmas time, what price a contact back to Adelaide Al? Just like the VK3 boys did from Lofty to Melbourne the other week.—SZAW.

144 MEGACYCLES
VICTORIA

32ZCZ has been flat out lately trying to get things organized on a.s.b. so he has not been too active. However, he sends this news from Ballarat. The activity in the Western District has been down to a minimum. A possible exception of a very abnormal decision by Ron 32ZCZ and 32EJZ to go to Mount Lofty in VK3 to see if they could contact VK3 stationers. This was a very poor decision. The result of much discussion on the regularity of Adelaide high band tv. signals being received in the Western District. The hope that there was was hoped, probably due to poor conditions, though contact was made on 2 and 6 mX with Herb 30NN (Yannac, about 200 miles), and 144 30NN. The 30NN station is in the Western District. SPO Ballarat and Michael 32CZ Melbourne. The signs from Mt. Lofty were heard in Ballarat. The signs from Mt. Lofty were heard in Ballarat. The signs from Mt. Lofty were heard in Ballarat. Since conditions at the time were very poor, it does appear that under reasonable conditions signals would get through both ways and that there would be a great interest in the expedition in both VK3 and VK5.

Sideband is the main topic of conversation in Ballarat and there are now two signals on 144. 3ZBS 144.82 and 3ZEJ 144.525 respectively smarten up your b.f.o.s. chaps. 3ZHH is now active on 144 in Ballarat, the name is Kevin. Des 3BP in gamma matching a long yagi for 144. Bill 3AMH, now in Canada, is coming home soon with the bits to put an s.s.b. signal on the band. Reg 3ZPD in Horsham takes the cake as the most patient and consistent 144 Mc. operator in the Western District over the past month.—3ZEJ.

288 MEGACYCLES

Victoria.—Ron 3ZER (Ballarat) has an 832 final going and has a series of skeds arranged with Col 7LZ for Sunday, 6th Dec. from Mt. Bunninyong. Do not know if they contacted, conditions were ideal that day on 50 Mc. and Col was heard busy working JA and VK4.—3ZER.

AMATEUR T.V.

Dennis 2AWW/T has his flying spot scanner going, using a standard e.h.t. transformer and standard 70 degree rec. yoke, the e.h.t. is 7kV and is obtained by lowering the horizontal drive, the tube itself is a 7BP7. Dennis was shifting to a new address and left his equipment until last. When he went back for it, it was two feet under the Sydney flood waters. Now he advises that transformers will not take water. However, Dennis is just as keen as ever and would be pleased to hear from anyone interested.

5AO is also building a f.s.s. Another small a.t.v. convention was held in Geelong on Dec. 6 when attempts were made to receive a.t.v. pictures in Geelong from Geoff 3AUX, some 40 miles distant. Results were unavailable at time of writing. 3BU has a portable 9 inch t.v. rx and received the Melbourne commercial stations on a three el. beam inside a car while mobile in Geelong.—3BU.

B.C.I. AND T.V.J.

The W.I.A., Victorian B.C.I. and T.V.I. Committee has now reached full strength and is ready to receive information from anyone experiencing any interference to radio reception. They feel that there is often the need of assistance both technical and moral in dealing with these problems. We are happy to report that F.E. has given recognition to the committee and its aims, which are to help with the many cases of interference transmitting equipment and the Postmaster General's Department to render assistance in overcoming cases of interference. The many cases of interference that are reported are always generally known and it is with this thought in mind that we ask you, the Amateur, to help in this way. We can only help you cure the trouble. There is no need to think that your case is too small or too big. We feel that individual cases vary and the solution to one is not necessarily the solution to another.

We again stress the position that when any complaint is made, the Inspector will investigate immediately to determine whether the complaint is made through the P.M.G. or personally. If you have any doubts as to whether you are causing the P.M.G. any trouble, you should refer the matter to the Finance Branch of the P.M.G. and report the trouble if the report is made to you in person. If made by the Department, you will probably be asked to explain your personal relationship with the complainant. We do not criticise the installation to the person; if any criticism is to be made, leave it to the Inspector. Your job is to handle these problems. Above all, remember that from until such time as the complaint has been investigated by an Inspector. Any test that you make, be sure that it is made with confidence to the complainant. The difference between the Amateur and the complainor is bad medicine to the Amateur reputation; remember that Amateur is a gentleman. He does not know how to get a complaint to his fellow Amateur or to his neighbour.

Do not discuss the matter over the air. Certain sets have the habit of repeating Amateur sigs for others to hear, you might be talking about someone who is listening.

Please contact any of the following if you need any advice or assistance on any matter dealing with interference: VKs 3ZFQ, Kel Cocking, WL 2266; 3SM, Alan Crewther, FM 4406; 3MS, Morrie Waters, WL 9480; 3AEI, Alan Elliot, FU 1580; 3ZPO, John Anderson, WY 1726 (John is secretary to the committee); 3ZGP, Len Poynter, MJY 331, ext. 441, Mon. to Fri. 0845-1700.—3ZGP.

GENERAL NEWS

V.H.I. meeting. The Nov. meeting was held in the rooms on the 10th. Some 18 members were present. Max 32S. was the speaker. After apologies were received from Herb J.O. A welcome visitor was Max 32S. General business was suspended to hear a talk from Max 32S. on the subject "32S. in its duties." Many were really enlightened by the talk. Many questions were answered during the evening. Max came also with the news that F.E. had obtained the use of the 50 Mc. band and that he had the full text of which you are now familiar with.

V.H.I. operators are now reminded that David 3QV is now your representative on F.E. and that you wish to discuss. David will be only too happy to help to the limit of his capacity. David's only request is that being new to the position, allow him time to catch up on events and he will do the best he can. He asks that you kindly intend to pass on best wishes to you in your post.

(Continued on Page 21)

NEWS

Maurice Cox, WIA-L3055
Flat 1, 37 Boyd Crescent,
Olympic Village, Heidelberg,
N.23, Victoria.

Hi fellow Short Wave Listeners. This is my scribble once more with the news and doings of all s.w. listeners. I hope the bands have been kind to you all and that you may all be successful in your listening and projects for this New Year. Whatever you are and whatever you do, I wish you all the best for the New Year.

Now down to the news and doings. I have very good news. We, the s.w.'ers, have been given a full page in "A.R." so at this stage I would like all you s.w.'ers to drop me a line re your activities, your score for the countries heard and confirmed ladder. I would like you to send your Amateur countries heard to the DX post to Don Granley, Holbrook, N.S.W., and any information re s.w. b.c. to me so be in it chips, give me the information to keep the page going. I don't even mind if an Amateur writes to me (hi). Now I would like to thank the Publications Committee for allowing us to have the full page. I only hope that I can justify their generosity in allowing us to have it. Also my thanks to the Editor for the help he has given me, thanks Ron.

For the benefit of the States which have not got a Group going, the following are the rules of the Victorian Division Group which, I hope, if formed, you will observe so that all States are in line with each other.

1. Membership is only open to interested persons, the non-payment of dues is compulsory for listeners no matter what bands they listen on, i.e. short wave broadcast, broadcast, or Amateur bands.

2. Membership shall be essentially as an Associate member to W.I.A. except that those under 15 years shall not be charged for membership. All fees are as for Associate membership.

3. From the general members each year, there shall be elected a President, Vice-President, Secretary, Assist. Secretary and any committees considered necessary (i.e. contest, organising, etc.).

4. President shall be responsible for conducting all meetings, etc., and to act as chairman for the Group which, I hope, in his capacity when the President is absent, Secretary to act as group correspondent, etc., magazine correspondent to forward to W.I.A. and to prepare notes for W.I. broadcast each Sunday.

5. (And the last) The Group's aim is to cater for all persons interested in radio. Provide a meeting place to discuss radio and events, etc. Arrange demonstrations and exhibitions of equipment relating to the hobby. Organise contests for members' participation, and competitions as it sees fit. To encourage its members into the field of Amateur Radio with its associated attractions.

Well that's it, you s.w.'ers, organise your State Groups on these lines and you can't go wrong.

CORRESPONDENCE

Which there is not enough of. Come on now chaps, you know what I want. Help me fill this page up.

Here is a letter from Mac Hilliard L3074 and he quotes: "At the present time I am rearranging the x'ing set-up here. I hope to be erecting a 3600G and having a 3000G, 3000G and also a new v.h.f. receiver—30 to 100 Mc. so I guess I'll be kept busy for a time." Well, how about that chaps, he's a s.w. coming into it to his w'd j.wel and it were I. Mac also said he now has 49 countries confirmed. Congrats, Mac. He has also found conditions this month N.W. poor. Thanks for your letter, hope you are enjoying. By the way, chaps, send me your scores re countries heard, confirmed and zones confirmed. So far there is only five of us in it.

S.W.I. GROUP IN TASMANIA

The W.I.A. S.W.I. Group (Tasmanian Division) held its inaugural meeting on 11th November. The meeting was attended by a disappointing number. It was agreed to elect a President and Secretary. Mr. Pat Geeves was elected President and Mr. E. A. (Ted) Beard Secretary.

The assistance of Ken TKA was a great help to the "green" secretary at the meeting. A few more full members of the W.I.A. would be a valuable asset to the Group, both for advice and assistance, and also the members who wish to obtain the full ticket.

It was suggested that all headmasters of senior schools be approached with the view of obtaining new members from the interested pupils from their respective schools.

The second Wednesday of the month was decided as the most favourable to hold our meetings, so Pat and Ted have their fingers crossed and sincerely hope that there is a big roll-up of intending members.

Thanks must go to the Institute for the offer of the use of their receiver and library, so if the meetings don't encourage members, the last two items might act as bait.

Business was held at 9.30 p.m. and all present paid a visit to Ken TKA's home and had a sample of "monkey chatter" (sorry Ken, I must agree s.w. has good points). Ken contacted a couple of lads in the mainland and all present had the pleasure of having a pow-wow over the air. A tour of inspection was taken over the various pieces of equipment (anything missing, Ken?), following which we all retired to our various homes after a very informative first night.

We were all well for this month. How about rolling along next meeting and providing a bit of interesting news to "A.R." For this month, here is a piece of equipment address: E. A. (Ted) Beard, WIA-L7002, 148 Derwent Avenue, Lindisfarne, Hobart, Tas.

Now to my young friend, Don Granley, he forwards the following:

DX INFORMATION

PFYNA will QSL 100 per cent. JT1KAA on 80 meters. The R.A. packet was sent, higher frequencies are Russians. ZBZB will QSL only to Commonwealth listeners, and only if an I.R.C. is enclosed. VQNS and VP2CC are in the (M) zone.

Judging by the few notes which are sent to ZZR for the DX page, it would seem that this is not a popular time among the listeners. It is difficult to gauge the G-Iand where the I.S.W.L. difference has had to limit the number of stations printed. Don't neglect to send your notes to ZZR. Just the way by which we can show that we are not the useless body that a few individuals would make us out to be. For the VK3 s.w.'s, any you can hear, please send me the names of stations heard to Maurice, he will pass them on to me as we are in contact by mail regularly. I will also, if possible, send myself have them. We will direct them along to Listeners from other States are invited to send their notes to ZZR, he will be very pleased to hear from you.

JAIACA.—My old friend Haga sent a long screed this week, giving me details of conditions of Amateurs in his country. He answers all reports, and is an ardent stamp collector. Address is 847 Mure Mitaka, Tokyo.

Nothing to report from overseas this month, but I would like to draw your attention again to the Pacific and American stations on 80 mc c.w. at from 1700K onwards. Most of them are working into 2L and are readable 4/7 or 8/9. I have heard a few on 2L and many for many weeks now, but am back on the job again, active all bands to 2 mx, complete with vee beam.

NATIONAL FIELD DAY

S.w.'s from all States are advised to read the rules (elsewhere in this issue) and enter this Contest. To any chaps who have not the pasted, would kindly invite you to enter the listeners' section and make your last year's top score of 214 points, credited to a VK2 listener.

SENDING QSL REPORTS

Most of the active listeners in Australia have, at some time, forwarded reports to Amateurs. A few of us have been very fortunate, in that they have had a good percentage of returns; others have not done so well. I would like to say how few I would like to address these few brief remarks, in the hope that they will think me kindly of the chaps who don't answer their reports.

In the past I have been one of the strongest critics of the non QSLing Amateur, but with the passing of time and years, and many hundreds of reports, I am beginning to see the other side of the picture. When I first started to send cards out, I was very hasty, regardless of whom and where. Many others do the same thing. But replies are not forthcoming. Why?

You send a report to a VK5 who is working a chap in your State. All right, he knows that he is getting there and doesn't want a further report, but the chap in your State, or other card to old Harry who lives few miles

away. He doesn't appreciate it at all, for if he is operating on 40 or 80, he jolly ought to be getting out.

Then there is the fellow who says, "I heard you at 8 p.m. and sent me a card." Don't laugh, fellas, it has happened! These are a few of the examples which can cause ill feeling between Amateurs and s.w.'s. If we all try and avoid these transactions, our reports will be of value, then we are not to blame if our cards are ignored.

BUSH FIRE NETS

Look out for the Western District (Vic) nets VLSTW on 3393, Westerners on 3265, and Mortlake on 3340 Kc. Many of the members down the coast, licensed Amateurs, but being a fire net, don't expect a card.

VLSTW reports could be sent to Don ZAKN whom I think will be pleased to hear from you. These fire nets are not always the amateurish affairs they are made out to be. Whilst admitting that our net can be a bit haphazard in times, the same cannot be said for many others. It is a treat to listen to the operating procedures on some of these frequencies, and a good instruction for those who operate on them.

I will arrange a card from VLRS on 2132 Kc. for any good reports, and I am sure Henry will be very much appreciated. Don't forget VLSTX a little further up the band. The latter is on every Monday at 8 a.m. sharp.

QSL LADDER

	Countries	Heard	Confirm.	Zones
Eric Trebilcock	250	247	4	9
Ian Thomas	176	142	9	25
Don Granley	184	45	25	
Maurice Cox	161	18		
Mac Hilliard	183	45		
Tom Hayward	153	35		

Thanks once again, Don, your letters are always full of interest. Keep up the good work, and I am sure you will be a big success. The VK2 notes as supplied by Tim Mills.

NEW SOUTH WALES

A new year with us again and I have only just stopped writing this my letters! Looking back on 1959 it has been a good one for us. Our membership increased by well over 100. The Group has been very active. I hope Santa could get down your chimney with all the long wires and beams on it and left you something that was useful in the radio line—something to do something in the radio line.

I would like on behalf of the VK2 Group to wish every other s.w. the best for this year, and the Group to meet a challenge to all comers in all contests for the year.

From Don L2033. Anyone hearing JZJHA and needing a QSL card, should send a request to JZJHA, 1100 Broadway, New York, N.Y., U.S.A., who is JZJHA's QSL manager. (I suggest that they include a self addressed envelope and an I.R.C.). Thanks Don. I would like to extend to all visitors to Sydney during Australia Day week-end, an invitation to attend the Divisional Convention, which will be held at the W.I.A. S.W.I. Group is one of the sections that is putting a display on, so how about coming out for the day? Anyone coming to Sydney for their holiday, please drop in to see me. I can be addressed via Box 1734, G.P.O., Sydney.

At our November meeting the Group discussed at length the results of the 1959 Contest. At the time of writing the results have not been passed on to our Divisional Council. Until this is done, the full list is not complete, but as this stage I can say that the division fell into two sections. The first was an award open to any listener anywhere, requiring 100 VK cards in a ratio from each State. The second dealt with awards for use within the W.I.A. Listener Groups. Most of the ideas were on the types that are in use overseas but require less than 100 VK cards.

It is felt that as many of the s.w.'s spend only a short time as such before obtaining their tickets, the material proof of their ability to receive is hoped that these awards will assist this aim.

It has been found that in the running of the Contest a lot of work is involved. This is now being drawn up and a copy will be passed onto the secretaries of Interstate Groups. If any of you live in a State where the Group can get the divisional list in order, write direct to us, S.W.I. Secretary, C/o Box 1734, G.P.O., Sydney, for your copy. Please supply the stamp, with the name and address, subject of report of any kind, please return them either to this Division or to Maurice for "A.R."

So it is all chaps, send in your letters to me. So till next month, the best of listening.

73, de Your Scribe.

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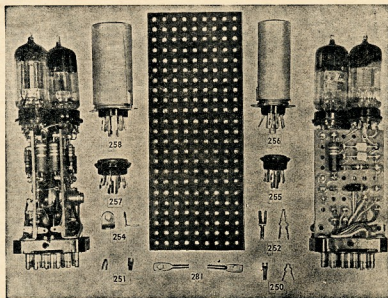
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CORRESPONDENCE

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W.I.C.E.N.

Editor "A.R.", Dear Sir,

It would seem to me that the wrong approach is being taken in the organisation of W.I.C.E.N.

Except for a few Amateurs who are going along, all enthusiasm has vanished, but I am sure that all would be on deck if they were needed in an emergency.

It should be understood that the Amateur is an individual at heart, and as such has no liking for red tape, but also that even the most unco-operative of us only live for the day the rig can be used to save life and property. So in any emergency Amateur Radio will be used as it ever was, and with the same good result. It can't be otherwise.

It is perhaps a good to know something of service procedure, but it is impossible to envisage a situation where an Amateur would be called on to use it in its precise form. The services of Amateurs would be likely to co-operate with would know nothing of this procedure anyway. (The Police, Flying Doctor, P.M.O. and the many other services about the country).

Some criticism must be levelled at the organisers of W.I.C.E.N. even though I know that they are quite sincere and are trying that the rig can be used to save life and property. It is my opinion that a different approach should be considered. I am sure most Amateurs are of the same opinion.

As an example, I quote what took place in the last session of the North Coast, and the W.I.C.E.N. session following:

VKJAWS related his activities during the danger period, in which he told of how he had difficulty in obtaining an up-to-the-minute weather forecast. He made the mistake of saying "weather report" instead of "weather forecast," but there should have been no doubt as to what he meant. Anyway briefly, he asked and was told that the weather forecast was available to Amateurs during flood danger periods. The answer he got was a long dissertation which went on and on for twenty minutes, instead of a weather report. Well on the next over, Lou polly explained about the cross purposes, and requested the weather forecast to be sent to him. If the C.D.O. wanted messages sent, it was up to him, the C.D.O., to see that they were directed through the proper channels, etc., etc. That was the end of the matter, and he was told to and nothing else, or words to that effect.

Now anyone will agree that this was a bad mistake. In the first place an Amateur, placed as Lou was, is there to get outside information more so than to send it out. After all, they were the ones who required the forecast, so as the C.D.O. would know how to act.

Actually, another Amateur further north was heard to make some information from Sydney through Amateurs who had got the information by them from the weather office. I suppose they were passing third party information, and it took them four hours for the C.D.O. in Lou's area to get the information and by then the damage was done.

In the same session, reference was made to the radio sets owned by the C.D.O. We were told that these sets would not be any use for long distance communication, but only for local use, on account of their low power—about 12 watts. Well, I know that this can be used for State wide service and moreover they will be. There are quite a number of nets, working State wide. Such as the "Statewide" net. To name a few: The Forestry Commission, Flying Doctor, W.C. & I.C., D.M.R. and others. I know, because I was engineer-in-charge of the W.C. & I.C. for many years. Since its inception in 1947 till 1952. We were using 3BZ sets and worked a radio phone service day in and day out. I have been in charge of the parts of N.S.W. on 3388 Kc. and 5255 Kc. This net is still in operation.

As to the approach that should be taken, I think it is a matter of having good mobile equipment and a good C.D.O. with the ability to send messages with minimum fuss and delay without confusing side talk. And last, but not least, the great ability of the older Amateurs and the improvement in the emergency. Remember VK2KN at Kempsey in 1950?

Much could be written on this subject and I think a study of the A.R.R.L. may show the way.

In conclusion, I would like to stress the fact that this letter is not to be taken as an attack on anyone and that nothing could be further from my intention, but as an effort to perhaps give at least one person a view of how this question should be approached, and to perhaps start some more interest.

—R. B. BENSLEY, VKIXP.

SHORT WAVE LISTENERS AND AMATEURS

Editor "A.R.", Dear Sir,

Over the last couple of years S.W.I. Groups have sprung up within the Divisions of the W.I.A. It is very good that the interest is being shown, but the fact that the Groups are "drifting apart" is perturbing. To expand this statement, why has one Group grown very rapidly? Another large one much slower? Another State without a Group and another having dropped theirs? Why does another State make a difference between S.W.I.s and associates? I thought that they were one and the same and realise only too well how hard it is to organise and run these Groups, but it is time to really get together and put every S.W.I. Group in every State on an equal footing with each other and their own Divisions.

To make this possible it is up to everybody to do his share. While a great number of Amateurs have done outstanding work on behalf of S.W.I.s, a few have done a lot of harm. The open statements on the air about S.W.I.s in general, by not answering some of the many excellent QSLs that they receive, although they use the information on I.R.C.s. contained in them. There are some cases that have come to my notice where a Amateur does not take the time, by refusing to pass on general information to them, but these same "Hams" cannot do enough for the chap with the call. (Some of you are on my black list.)

Not all the blame is with the Amateur though, for S.W.I.s should take more care with their activities. Some QSL that their "next door neighbours" or supply incorrect information. This is not to value anyone's call all adds weight to the listener opposition. If more is to be known of the work of the listener, then it is up to him to try to publicise his activities, how about entering the next contest or sending in a DX report? You cannot sell a product without advertising.

May I take this opportunity to personally thank the many who have helped me for their time and efforts spent to build up the W.I.A. Short Wave Listeners' Group.

—TIM MILLS, WIA-12052/VK2T3M, Secretary S.W.I. Group, N.S.W. Div.

P.S.—The views expressed above are my own and not necessarily those of the Group. I would like to hear from the Secretaries of Interstate Groups or any other interested persons.

NEW QTH FOR EX-HK1X

Editor "A.R.", Dear Sir,

From the May issue of your magazine I have had the pleasure of reading the contents. At the moment I don't know the sender of the magazine. I must pay any bill for subscription. From May to August (the last received), I have read the most wonderful article on s.b. Congratulations to the author and to you the editor of this fine article.

Please QSP to the VK boys that I am going to QSY from my present QTH to Bogota as HK3X. I will be active again as HK3X from 15th December on 20, 15 and 19 metre bands, phone only. I will be very glad to meet again all my numerous friends over there and also to all that may need HK for DXCC.

My new address is: Edmundo Quinones P., HK3X, Carrera 27, 70-89 Bogota, Colombia.

After more than one hundred contacts with VK boys I was unable to hook someone in the Northern Territory for my VK Certificate. I hope to have better luck as HK3X. Many thanks and best 73.

—EDMUNDO QUINONES P.

Ex-HK1X, in December HK3X.

ROSS HULL MEMORIAL V.H.F. CONTEST RULES

Letters have been received from A. W. Rushby (VK2ABR) and H. R. Rofe (VK2HE) the matter of late publication of the rules of the Ross Hull Memorial V.h.f. Contest. These have been forwarded on to the Federal Contest Committee.—Editor.

DX

(Continued from Page 17)

ADDRESSES

MPITAF—Via DJ2KJ.
VSRM—Sgt. Mackie, R.A.F. Khormaksar.
VR3W—B.F.O. Christmas Island, via Honolulu.
HS1B—P.O. Box 1038, Bangkok.
TQ9B—Via WQ4F.
ODSCI—Scott Magnus, P.A.A., U.S. Embassy, Beirut, Lebanon.
ELIX—Charles E. Reed, 38, Harbel Liberia.
FGTXZ—Charles E. Reed, 31 Rue Jeanne d'Arc, Grand Bourg, Guedeloupe, F.W.I.
ZDTSE—Via W4ML, 212 Jakeman St., Bayside.
HZ1TA—H.R.H. Prince Talal al Saud, The Royal Palace, Riyadh, Saudi Arabia.
HR0AB—Via HRIAB P.O. Box 76, Tegucigalpa, D.C., Honduras.

VK COMMENTS

I worked VK4XC the other day—2AMB was on the key. Laurie says there does not seem to be much c.w. activity at times; 7 Mc. in VK4LAD, most of the chaps seem to be phone cranks.

2AQJ found band conditions to be very erratic for the month, 20 metres very changeable; rather noisy, even for locals at times; 15 OK to U.S.A. in the middle of the day and good to Europe after 1200z. Bud is very active on s.b.

2ZUW was not very active as he had been pretty busy otherwise, he did hear some nice ones but was not too much competition. Frank QSL says that UG6 still eludes his net somehow.

3AOM found conditions on 20 metres very peculiar, one night there would be plenty of activity, and the next, almost dead. As far as his station was concerned, more DX was logged than for a long time.

4DO was very active on heavy QRN, being so far north and in the thunderstorm period of the year.

5HD comments, with regret, and surprise that no reports on 28 Mc. activities appeared in the November "A.R." He says "It seems that 28 Mc. activity in VK is pretty low. Why?" I don't know, but Ham seems to insist on having the band available on his tx. A little mail reading on 40 seems to supply the answer. My rx is no good on 10 or 1 never hear anything there." Max has replied rather convincingly to show that plenty can be worked on 10 metres.

6HD reports and comments from each of the following S.W.I.s and wish to thank them for their valuable assistance: L2001, L2022, L3055, L3065, L3074 and BERS-163.

I am greatly indebted to "DXC" the weekly Amateur magazine from Don Chesser, VK4VX (via ZQL) for much of the material in News and Notes.

Thanks for the Merry Christmas and Happy New Year. Greetings received, and I hope all readers of "A.R." had a good Christmas and that the New Year will be pleasant and prosperous.—VK2ZB

V H F

(Continued from Page 18)

During the meeting, the field days for 1959-60 were discussed and the following laid down. The first will be on the 31st, Jan. 31st (Field Day), Feb. 21, Mar. 13 and April 17 and that National Field Day rules apply. Scoring will be on the 31st, 31st, 31st and 31st. Above, a multiplier of three will apply to all these contacts. There will be a cat. 32PQ or 32ZD within 14 days of the field day for checking. Results will be announced at the next v.h.f. meeting.—3ZGP.

SOUTH AUSTRALIA

Fox Hunts have been held regularly every month on Saturday nights with very good attendance. On the 31st and 1st groups, Sunday, 22, saw a change to daylight hunts, unfortunately though the attendance was good, the weather was oppressive and two hunts were conducted with Barry 3BZ winning the contest on 30. Hughie 5AV came second. On 28th Mc. Gilbert 5GX came in first with Graham 5X second. No 30th night, no 30th night and has managed to successfully operate his gear with one switch control. Col 5RO is looking for a 6v. generator so that he can join the mobile group.—3ZAV.

Amateur Radio, January, 1960

considerably. The new fees are as follows: Full Members, 20/-; Junior Members, 10/- per year.

The Annual Picnic held at Tourourng Reservoir, near Whittlesea, on Sunday, 13th December was quite a success. Events of all nature were indulged in, and the kiddies enjoyed their ice cream, sweets and toys.

Our January meeting will be held in our room on Friday evening, the 22nd, when final arrangements are to be made reference team and gear for the National Field Day. A Prosperous New Year to you all.

QUEENSLAND TOWNSVILLE

What a surprise in reading No. "A.R." that "Myxomatosis" had failed to exterminate my old friend 4 Peter Rabbit (4PR). The battle must have been tough but he survived, hence notes from the capital city at long last.

During my recent holidays, during which I travelled to Perth, where John 6GU and XYL Joy and children, welcomed me on the platform. John changed shifts of act as my chauffeur and we certainly saw all that was to be seen, also met a few of the boys.

In the beautiful city of Adelaide, Gordon SXU took me along to the Council meeting to meet the boys. Doc 5MD escorted me home after offering free accommodation which was reluctantly declined. Think of those big payers. Doc? Ken SIM showed the suburbs around Lockleys. Gordon SXU disappointed when the satellite failed to appear as he introduced me to the Moon Watch Group. Hope you have been successful since I left.

In Melbourne George 3AOM did the honors in taking me out to see headquarters and around as many executive members as could be visited. Also took me to the Dandenong Ranges. Thanks George. Opportunity was taken to get hits and places.

On arrival in Sydney, Bill 2AJL, Jim 2AKU and Ernie 2ADL made certain I was not left stranded a homeless waif. It was just one hectic rush to the various suburbs to meet as

many of the boys as possible. Very sorry that my port was so heavy, I was unable to accept all the gear that was offered. In fact a few XYLs wanted to donate complete stations! A visit to Dural was arranged—certainly the locality for an Amateur point of view—it's very nice. Bill 2AJL in his new car arranged the run in mileage, with me a passenger, around the various resorts. Quite a nice trip, sorry to leave.

In Brisbane, although time was very short, it was arranged to meet Stan 4SA, 4FN, 4ZM, 4FP and others. Also a visit to a specialist was arranged and his advice will be rigidly observed. Hal 4DO as usual was there to meet me at Rockhampton.

On arrival home, Bert 4LB was soon to call to see if I had expanded any after discussing all the tea that was brewed in my honor at the various schools.

Conditions on the bands have been very poor and today (Sunday) no W.I.A. news was heard from Brisbane. Tonight no VKs were heard on any band.

Now that the New Year has arrived, I want to wish you one and all the best in 1960. 73 Bob.

SOUTH AUSTRALIA

The monthly general meeting of the VK3 Division, better known as The Division, for November was held in the club rooms to a capacity audience, which was regarded with what is probably the best lecture they have had in many a year. The lecturer for the night was Mr. Brian Nolte, of Philips Industries. Hendon, and his subject was "Transistors and their Applications." I think the one thing that appealed more than any other, was the down-to-earth manner in which he tackled the lecture. As quality Control Engineer of the transistor laboratory at Hendon, he could have been excused if he had at times gone above the heads of his average listeners, but at no time did it look like becoming too technical and the interest was maintained from the start to the finish. We thank Philips Industries for their generosity in making available the test

gear necessary to the lecture, and were most impressed with the Tektronix cathode ray oscilloscope and the other of the later. Another piece of test equipment. The vote of thanks to the lecturer was proposed by Bob 5FU, who, in a few well chosen words, expressed the desire of all present as to their appreciation of the splendid job that Mr. Nolte had done.

General business did not bring to light anything of particular importance other than that Council stated that the attitude of the Housing Trust towards the erection of aerials by its tenants and its effect on W.I.A. members. Council was pleased to announce that the Trust would permit application to erect aerials, and this would also apply to Associate Members and genuine S.W.s. It was also stated that should any person be genuinely interested in radio communication providing that he presented to the Trust a letter from a responsible person to that effect, the Trust would give the application the consideration that it deserved. Council is to be congratulated on its efforts and once again demonstrated that unity is strength, and that whilst officialdom will quite often brush off the individual, it will always co-operate with an organised body. Non members please note!

There was no distribution of QSL cards due to the absence of George 3AOM. Some members had called him all the nasty names they could think of, the meeting finished at the somewhat early hour of 10.25 p.m. I make certain that the members of the division were not of Leigh 5LG, not because he told me at the meeting to lay off him, as his wife was snoring, but because he threatened to knock my block off if I didn't lay off, but simply because I remember that Confucius once said, "He who writes and runs away, lives to write another day."

I forgot to mention that "Mime Tinkit Austin" (8CA) was the chairman of the meeting, and also that John 5EJ presented the members of the W.I.C.E.N. in general terms, and also stressed the need for volunteers and a general expression of the benefit of the W.I.C.E.N. plus the valuable publicity for Amateur Radio through W.I.C.E.N.

The news from the Upper Murray gang is a little on the light side this month, so that it was any lighter there wouldn't be any at all. Apparently Tom's (5TL) recent course in business management, or something, has taught him to be economical with words, and I am reaping the result. The only news that I have is that Tom and Hughie 5BC went into a huddle over a Commanco radio. Tom came out of it with an unserviceable tube. The new tube enabled a signal from Doc 5MD to be heard one Sunday night, but whether this information was tendered as a compliment or a complaint, I have yet to find out.

Received a little note from Bill 5HR this month with the information that he was browsing through a QSL copy of "QST" and noticed that a number of VK stations had worked all continents on phone, among them being Don Taylor (BDX). Don can still be heard with a 1.6 ph. signal on the self-made 1.6 mhz band that he has haunted for so long, although I must admit that I have heard him on 14 Mc. c.w. from time to time. He is the bloke from the Black Forest, remember?

Rex 5KY has not been heard on the air so much lately. He has not been altogether 100 per cent, has been battling it out with a crop of boils and therefore cannot be excused. Nasty things Rex, hope all OK now. I had one once, never talk about it much, memory too painful, me my meals off the mantle-piece for three days.

Rex 5DO has finished re-building his house and is now busy winding transformers for his new famous tx that will end all tx's. How often do we hear that said, only to be contradicted six months later. Anyway, that is as it should be and is probably what keeps our grand old hobby going. You have no made any statements to the local paper lately Rex!!

Neil 3ZAW has been co-opted to the Council and has been assigned to handle all the paper work associated with the disposals section. Nice work, OM.

Received a card from a VST this month who has apparently returned to G land and either had a touch of the conscience or has recovered from a lapse of memory, because it was dated 1933. I repeat, 1933. It had been through the VK6WI Bureau and I believe that Bruce, who incidentally has been out of Amateur Radio for so long that I hate to think back. It could be a joke of course, but who would want to play a joke on me? I don't answer that. I mentioned to Doc 5MD that the postal authorities always got their man and he remarked that they would have a hard job in my case. By the look on his face I

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think he was being rude in a polite manner. I will have to think it over.

On Wed 27th we left for a sojourn in VK3 is now demarcated back in the city of culture and is a biffin at AD87. I met him at a meeting one night some months ago and did not realise if he was active at all. In fact, the fact that he was always pretty keen on Amateur Radio, I will have a shet in the dark and say that he will soon be heard again.

The audience attendance and reactions to the VK3 monthly general meetings is at the moment of a very high order. The reason for this is not that, in fact, it is still, in a mile, none other than the good work of the programme organisers for the Division. I have heard it said that too many meetings are held in the month for no better reason than that it has been a month since the last one. This can never be said of our meetings because the variety of lectures and the entertainment provided is the main reason for the attendance records each month. Gentlemen, meet the programme organisers, Bob 8PU, Lloyd 50K, and Jack 50A. Programme organisers, meet the gentlemen. Sustained applause - sustained applause.

Frank 5LX was heard recently testing on 40 mc, and as he is via mobile call sign it can be presumed that he was on his boat in the gulf some nights; long time no see, Frank.

Doug 8KK, Brian 8JR and John 5DJ are also on the air. Doug is now using a variable autotuning with transistor power supplies with some quite good results. What about a short article for the magazine?

Albert 6GX is decidedly mobile-minded, particularly on the v.h.f.s, and to save the v.h.f. scribe the trouble of pointing the bone at me because I am attempting to steal his thunder, I hasten to add that most of the work that has been done on the v.h.f.s, for W.I.C.E.N., and this angle lets me in through the back door.

When I am writing these notes, I was in touch with everything that happened and was always coming up with some red-hot news for the readers of the magazine. No longer on the Council, I am treated like an outcast and have to engage spies to assist me, and sometimes even descended to listening to keyholes in the neighbourhood. If I stand up at meeting nights and ask a simple question, Comps 5EP gives me a sneer that can be heard a half a mile away.

Bob 5MD takes out a pair of handcuffs and a huge ball and chain (no sit down Audrey, not you) from his pockets and looks at me. How dare I have been talking to the Council lower than against me, I have learned a red-hot piece of news this month that will give them a severe attack of colicolycolics to think that I am a wake-up before they grudgingly release it to me. We are to have a new club room next year because our present landlords are moving to new premises at South Terrace. We will be moving to the recently erected parish hall of St. Paul's Church in Pulenney Street, and at a rough guess I would say that July will be the first meeting night at the new address. The hall has a stage suitable for Council to sit up on during meetings (Remind me to order the tomatoes and eggplants) and also a stage for the band and sell night, that is little me, will stand up on this stage (Remind me to cancel the order for the tomatoes and eggplants) and I think the move will be to our advantage. There will now be a two-minute silence whilst Council members bite their finger nails and tear up sheets of brown paper and make a big mistake in this piece of news. Sticks and stones may break my bones, etc., etc., etc.

The S. boys are apparently keeping their eyes on the Amateur front, judging by the results to hand this month. Stuart 3MS has been fairly active and went to the VK3 Western Districts meeting in the over the border on Wed 27th and Nov. 1. Erg 8KV has been on 14 Mc. with his well known c.w. signals fairly frequently, and if you want to hear a good piece of c.w. copy, you can hear him. This is the signal to hear. Tom 5TW has his occasional contact on 7 Mc., but now that the weather is getting warmer and conditions in the sea are changing, the congestion will probably come out of hibernation. Leo 5GJ has been busy at the local automatic exchange but has managed to squeeze in a few words on 40 mc. He has been helping one of the local boys to iron some bugs in a rx and has been sweeping out the cobwebs from his 144 Mc. gear and preparing for the coming of the winter. Claude 8X and his XYL have been visiting VK3, and if he runs true to form, all of the disposal firms in that fair city are now making a big mistake. He has been doing the cobweb business with his 144 Mc. gear and

has also built a preselector which really works. If I keep on mentioning 144 gear much more I will be accused of a lot of letters on cardboard from the v.h.f. scribe for poaching on his preserves.

Keith 8KH is reasonably active on the bands and has what I understand is a re-built rig which is t.v.i. proof, b.c.i. proof, vermin proof, and any other proof that you can think of. He is an extremely active member of W.I.C.E.N., and has been heard on the bands and mutual noises per medium of a recently acquired throat mike. Clarrie 8KL, of post-war v.h.f. fame, is not active at the moment. Gordon D.C.A. I understand that he is not active on the bands but probably the bug will bite again someday. Long time no see, Charles. Len 8OB-5S is definitely active on the bands with a long-long-long-wire antenna, somewhat reminiscent of Freddy Hays (5FH); to be exact, it is about 700 feet long, and as Len's house is perched on the antenna enters the shack via the floor. No they don't stand on their heads when in QSO.

Lionel 5OG is particularly interested in signals from VK3 these days. His brother is a minister at a Methodist mission station on the island of Salamo, with the call sign of VK0RL, and Amateur Radio bridges the distance to the mutual satisfaction.

Les 5FN is not heard these days and was wondering if he had given the game away. Personal contacts are few and far between, must only be of a temporary nature. Am I right, Les? Bob 8RI at Mr. Bryan is expecting big things from the Electricity Trust for the future. I can only say that "niggers are they that expecteth nothing. They are seldom disappointed." Sometimes, however, they "cop the lot." Carl 5SS keeps his regular schedules on 7 Mc. nights, but unfortunately for me, whenever I listen to him he is always talking about birds that don't eat, birds that eat too much, birds that are in the legs, birds that are in the legs, birds that are in the legs, birds that are in the legs. Before I can gather strength to turn the dial, I usually finish up weak in the head, or sick in the stomach, or both.

Sadness creeps into the notes as I write, with the news of the passing of the wife of Luke 8LJ. Keen and interested in Amateur Radio and all things, Luke has been a help and a guide to all, and we all extend our deepest sympathy to him in his sorrow.

As you are reading these notes, Gordon 5XU will be at Ceduna on his well-earned vacation. He will be active on 7 Mc. with the Type 3, and will be looking for contacts, usually between 10 and 3.30 pm. There is no truth in the rumour that he has been heading to patch up the difference of opinion that recently occurred between Brian 5CA and the chief of the Wombat-Wombat tribe. Despite anything to the contrary, Brian is still the tribe's blood-brother and the official examiner for the smoke signalers club. He sure wields a wicked blanket in and out of the bush.

Well, as I write these notes it is November, as you read them it will probably be January and the start of the New Year. Therefore the VK3 Divisional Council extend to all members the Compliments of the Season and hope that the new year will bring to you all, Health, Wealth and Happiness. The VK3 members extend the same best wishes to all other Divisions and hope that the new year will see our grand old hobby of Amateur Radio still on the forefront and continuing to rise in popularity.

TASMANIA

Congratulations to Jack 7JL. Jack recently received a QSL card from ELAA, so Jack has now passed up the cards and sent them off to establish his claim for the following awards: DXCC, WAZ, and WAZ. F.b. work Jack.

We have had an unusually large number of Amateur visitors in VKT during November. Albert 210, Lindy 50G, and John 50K, the 5XK individually and collectively have probably seen more of this State than the average Tasmanian. It was nice to have each of you chaps doing the rounds of the shacks down here.

Conditions have not favoured the Sunday morning broadcast and round-up for the recent weeks, and as we miss the contact with the northern and north-western chaps. Serious consideration will have to be given to re-transmitting the broadcast on the 5X band, if conditions continue to be so poor.

During November, Sam 78M has been chasing that elusive DX in the very early morning, and it was good to see him. He is to come back to him around about 630 hours. What is more, it is very seldom another VKT is on the bands these mornings to keep me company. He has been doing a very good job, excellent DX in the evening. I heard a YV4,

four European countries, a XK6, and managed to have an f.b. QSO with VP8BO. The DX was a spot of leave during the latter part of November; lucky man, Keith. Dave 7XX has had his XYL in hospital. We hope she is fully recovered by now, Dave.

PAPUA-NEW GUINEA

Amateur Radio activity in the Territory has not picked up during the month, although there are quite a few that are likely to bob up at any old time.

Doug 8DZ and myself have just finished a brief inspection tour of the islands. At Wewak we found Jim 9AS extremely happy with the new DX106B and very anxiously awaiting the arrival of an SX100, hence the visit. The nice DX location at Wewak makes it possible to go places even with folded dipoles. Jim hopes to be a lot more active in the near future.

At Rabaul we found Norm 9NT wrapped up in his new Edmunds s.a.b. exciter. He is driving a pair of 807s in Class B as a linear but current plans lead to a change to the 2L linear.

Ian 9VM gave a demonstration of the mechanics of the quad I spoke of last month. It seemed to be a very simple thing to do, but out to be. Bill 9WP is inactive at present, waiting for me to send him a 6BR1 for his Panda tx. By the way, if anyone wants a cheap 60 ft pole and 20 mc. gear, there's one sitting in Bill Holland's yard doing nothing now that he has gone south. Anyone with enough cash to pay the taxi to the airport, do getting it down can have it as far as I'm concerned.

We should have stayed away from Moreby because as soon as we landed back John 8JF grabbed us to help lower Doug 9DB's tower which he has recently purchased. Bill Kelly supervised while myself and 8DT, Doug 9SB, and John 8JR pulled the guy down. The towers were cleaned at the Boroko Hotel shortly after the tower reached the ground.

It was a good quid at 9500 Hz performing very well, but not just a fraction better than the WJKB at 870. Doug came on with a new Pye dynamic microphone during the month and the B.C.C. new.

Did some more playing with my Command 8r's during the month. Am hoping to finish the job very soon by putting in a product detector. IQRN is still working well, and has been a lot couple of months and even though Europeans are coming through well, the noise on 15 and 10 mc is not very inspiring and many of the good ones go by without my even switching the tx on.—8RO.

HAMADS

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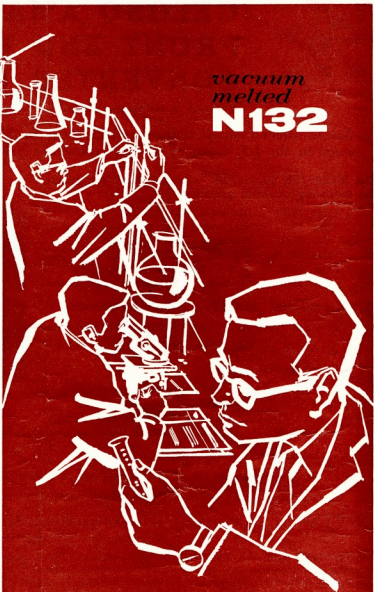


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